CASTLES IN THE SAND
WHY SCHOOL OVERCROWDING REMAINS A PROBLEM IN NYC

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APRIL 2002

EDUCATIONAL PRIORITIES PANEL

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EXECUTIVE SUMMARY

The mission of the Educational Priorities Panel is to improve the quality of public education for New York City's children so that there is no longer a performance gap between city schools and those in the rest of the state. Our coalition's focus is on resources, where too often decisions to raise learning standards are not supported by funding decisions. This is particularly the case with school facilities planning.

New York State now has one of the most ambitious student testing programs in the nation. Fourth-grade students are expected to listen to a passage read aloud to them and then compose a short essay. EPP members who have visited schools have seen impressive improvement in the early grades. Fill-in-the-blanks workbooks are disappearing, and there is a new emphasis on reading books and on writing. But city children are at a disadvantage by being crammed into overly large classes where there is less of a chance for individual attention by their teachers during these critical first years of education and language acquisition. This disadvantage is a contributing factor to the achievement gap between city students and their peers in the rest of the state. While only 44 percent of elementary school students tested at grade level on the fourth and sixth grade Language Arts tests during the 2000-01 school year, almost 72 percent tested at this level in average-need school districts, according to statistics released by the New York State Education Department in February 2002. This achievement gap exists even among students of the same race. Slightly over one third of African-American and Hispanic-American elementary school students in the city test at grade level in comparison to a majority of students of both races in average-need school districts.

These achievement gaps can be closed significantly. Careful research on the Tennessee STAR and the Wisconsin SAGE programs found that children's achievement increased by half a grade or a full grade level if they were placed in smaller classes in **kindergarten** or **first grade**. If they continued in smaller classes through to the third grade this initial "achievement bump" was maintained. **Low-income, minority children made the greatest gains from smaller class sizes.** The research also found that class size reductions starting in the third grade appeared to have little or no academic benefit. This explains why previous research studies found no relationship between class sizes and student achievement -- they were looking at the higher grades or a one-year reduction. However, there may be other benefits to reducing class sizes from the fourth grade up, such as improved student behavior and the retention of more teachers, who often leave for the suburbs for smaller class sizes, not just higher salaries.

The New York State Assembly, informed by this research on how smaller class sizes can close the achievement gap, fought hard to secure funding to reduce class sizes to an average of 20 students from kindergarten to third grade in high-needs school districts. Both the New York State Senate and the Governor agreed to increase the funding level each year from $75 million in the 1999-00 school year to $225 million by the 2001-02 school year. Almost all of the state funds are earmarked for hiring teachers to create new classrooms. In the first year of its implementation, EPP visited elementary schools where at least one class had been reduced in size. Our report, *Smaller <u>is</u> Better*, documented some of the most positive statements we have ever heard from teachers and principals about a state-funded program. Children were learning faster, and teachers were able to improve their instruction.

Elementary school overcrowding in New York City has kept this funding level to $140 million a year at the state level, because there are not enough classrooms to fully implement the program. 31,780 young children are now in city classrooms that average 20 students. But to close the achievement gap, all early grade class sizes should be that size.

Confounded by the persistence of overcrowding, the key barrier to reducing average class sizes, EPP wanted to avoid an examination of a constant volley of charges and countercharges between the two agencies and their various political allies. Much of the attention of policy

makers and the media on building and repairing schools has centered on the continuing battles between the Board of Education and the School Construction Authority. Too few commentators have looked at how school facilities planning has been executed. We "turned off the noise" to look at the most basic facts from 1989 to 2001 — funding, construction, and building capacity — to learn why elementary overcrowding had not been significantly abated in thirteen years. The picture is a mixed one:

- The Board of Education's share of total city capital spending tripled, from just a 10 percent share in 1990 to over a 30 percent share by 2001.

- Even this increase, however, is insufficient to solve the capital repair backlog and end overcrowding, estimated to cost $28 billion by the NYC Comptroller in 1998.

- Since 1997, more progress in reducing overcrowding could have been expected, because from 1997 to 2000, there was only a modest increase in enrollment of 6,835 students.

- Each proposed capital plan underestimated the cost of building new schools, thereby promising the construction of many more schools than could actually be built. Despite this underestimation of costs, many more new schools could have been built even within the Board of Education's limited capital budget.

- There are many ways of computing "per-seat" costs of construction. A look at actual costs over the last five years shows that the city's average per-seat cost for newly constructed schools is 100 percent higher than the rest of the state, not close to the range of 300 to 400 percent reported in the newspapers.

- Costs in New York City for building a new school will always be higher than the rest of the state. In most parts of the city, there is not enough land to build a one-story building. How to reduce costs, beyond eliminating waste and fraud, poses a set of complicated questions. Should the city lower the standards for its building codes for school construction? Should the School Construction Authority and the Board of Education lower their standards for equipment and the selection of contractors?

- New York City's schools are expensive to build, but other districts build equally expensive schools. The average cost of a newly constructed school in New York City (not including the purchase of land or design) is $45 million. Some schools built in other parts of the state fall within this price range: $47 million in Columbia County; $74 million in Niagara Falls City; and an $88 million school in Suffolk County.

EPP found that from July 1989 to June 2001, $10.5 billion was spent for building new schools and repairing old ones. Yet there was remarkably little progress in reducing student overcrowding. There were 247,994 students in overcrowded elementary schools (main school buildings) in 1989 out of a total enrollment of 465,258 students in main school buildings. Thirteen years later, there are 243,271 elementary school students in overcrowded main buildings out of a total enrollment of 514,887. This was a net reduction of only 4,723 students in overcrowded elementary school buildings over a decade. Capital expenditures to create new seats just kept pace with enrollment growth.

Why? Though annual capital spending for school facilities has increased, the proportion going towards new school construction has decreased. EPP has found that in the last five years, new school construction has dropped by a third. From 1992 to 1996, 30 new schools were built and 28,000 seats were created, but from 1997 on, only 20 new schools were built and only 17,000 seats created. Until 1997, efforts to end overcrowding constituted 20 percent of capital construction expenditures, but from 1997 forward this proportion shrank to just 12 percent.

The lack of focus on educational objectives for school facilities is an important issue at this time:

- The state funded program to reduce average class sizes to 20 students in the early grades is stalled at the halfway point because there are insufficient classrooms to extend the program to an additional 30,000 students.

- In light of the fast approaching deadline of 2005, when all high school students must pass a far more difficult science test in order to graduate, the current capital plan allocates only $57 million for science labs. In April 2001, Chancellor Levy estimated that it will take a total of $500 million to create and upgrade science labs in middle and high schools.

- A New York State Court of Appeals decision in a lawsuit brought by the Campaign for Fiscal Equity is expected in 2003 or 2004. Should the court rule that the current school funding system is unconstitutional, the case needs to be made that an investment in school facilities will result in providing New York City students with a sound, basic education. So far, three New York City Board of Education capital plans have failed to significantly reduce student overcrowding.

The premise of this report is that much of the funding and planning process for building and repairing schools requires fundamental change, not merely a change in the agency that does the construction. After three years of interviews, visits to newly constructed schools, and a review of funding for capital projects, the Educational Priorities Panel has arrived at the surprising conclusion that, despite the possibility of mismanagement and fraud, neither one is the central problem. There are no villains, rather, a confluence of parochial politics and narrowly focused strategies of facilities and budget staff. The result is fewer new schools and a perpetuation of student overcrowding.

The professional values of key participants in the capital planning process, all of which make sense within the world view of each of these professions, have displaced the values of educators:

Legislators For members of the City Council, the needs of their constituents, who elected them, come first. The concept of "fair share" for each Council district and each borough means that capital funding is *not targeted to the most overcrowded school districts.* Since every community school district has multiple, large-scale repair needs, funding can be better "equalized" by giving priority to capital repairs rather than ending overcrowding. Nevertheless, the pretense must remain that each new capital plan will make substantial progress in ending overcrowding. The cost of building new schools is thus substantially underestimated, which allows the capital plan to list far more schools than could ever actually be built given the funding available.

Facilities Professionals Keeping the physical plant intact and in good working order is their first priority. After two decades of woefully inadequate funding for school repairs, the NYC Comptroller estimated in 1998 that the price tag for bringing all schools up to a state of good repair and ending overcrowding would come to $28 billion. From the point of view of facilities professionals, given the stark reality that there is not enough money in the city's capital plan to fix old schools and build new ones, *why expand the number of schools when even the current number cannot be properly maintained?* But $10.5 billion would not have become available had the primary focus of each new capital plan been the aging infrastructure of schools, so each successive plan has been promoted as solving the crisis of overcrowding.

Budget Professionals Saving the taxpayer money and stretching each penny is the daily task of the numerous policy makers and technicians who struggle to close the city budget gap each year, despite the odds. In the absence of a clear city policy to raise student achievement levels, a cost-containment approach to education has continued. *In terms of dollars and cents, large overcrowded schools are the least expensive to operate.* In a random sample of elementary

schools, schools at 105 percent of capacity operated at $8,712 per student, while schools at 130 percent operated at $7,724. This sampling also shows that the larger the school, the less cost per student. As school size approaches 1,400 students, the cost per student drops below $8,000. In contrast, ending overcrowding, especially by building or leasing small schools, increases the number of schools in the system and increases annual costs. The drop in the number of new schools has saved money for the city and the Board of Education, both in construction costs and in operating costs. A similar cost-containment focus was the budget policy for the New York City Police Department until effectiveness, rather than savings, began to emerge as an imperative for policy makers.

Other reasons for the persistence of student overcrowding exist beyond this confusion over objectives for the schools' construction plan:

The City's Debt Load An objective look at the city's fiscal capacity indicates that in the foreseeable future, it will not be possible to both end overcrowding and bring all buildings up to a standard of good repair. EPP took a sample of other large cities in the nation to compare both their outstanding debt and their annual local revenue, adjusted for population. On a per-capita basis, in 1999, the ratio of debt to revenue of Minneapolis, Chicago, Philadelphia, Los Angeles, and Boston averaged 106.7. New York City's ratio of debt to revenue in the same year was 139. When the same comparison was made for the other large cities in New York State (Rochester, Buffalo, Syracuse, and Yonkers), their average ratio of debt to revenue was 112, still better than New York City's. New York City cannot expand its capital borrowing significantly. This means that a greater *share* of the city's total capital budget must go to school facilities.

State Building Aid's Negative Impact While New York City gets reimbursed, on average, 64¢ on the dollar for expenditures for capital repair projects, it only gets reimbursement of 25¢ to 37¢ on the dollar for expenditures for the construction of new schools. One reason for this is that New York City's projection of enrollment for newly constructed schools is used in the formula for reimbursement, instead of a far more liberal "rated capacity" that is used for the rest of the state. Though a regional cost index is used, which provides more funding for the downstate area than in most of the upstate region, it still does not realistically reflect the cost of building in New York City. So far, the Assembly has succeeded in creating a new school facilities funding stream, RESCUE, but it distributes funding merely by student enrollment. A far more significant restructuring of state Building Aid must take place. A needs factor must replace the current "spend-to-get" method of reimbursement, which permits school districts with the most local resources to draw down more state funding. Also, regional costs and cost ceilings must be revised so that they measure the actual costs of completed buildings in New York City, not just differentials in the cost of materials and labor.

The Reasons for Overcrowding Need to be Better Understood by Decision Makers

The uneven instructional quality of public schools in New York City *creates* student overcrowding. For example, one out of every three high school students takes more than four years to graduate. The Board of Education's grade retention policy for students testing in the bottom quartile of test takers has resulted in over 20,000 students repeating a grade. This policy further increases the numbers of students in elementary and middle schools. Referrals to special education programs have resulted in over 7,673 classrooms devoted to Resource Rooms in 32 community school districts. The paucity of good schools has meant that high-achieving schools tend to be overcrowded, while low-achieving schools remain underutilized. The greatest degree of misalignment between where students are concentrated and where there are sufficient school buildings has been caused by recent patterns of immigration. Instead of settling in traditional immigrant neighborhoods like the Lower East Side and the South Bronx, which have schools every five blocks, the newest settlers have clustered in neighborhoods in Queens, Brooklyn, the Bronx, and Upper Manhattan where there are not enough schools. School district practices, however, have also contributed to the persistence of overcrowding. Superintendents establish policies to reduce overcrowding, but they could do more to limit severe overcrowding and to reconfigure schools and zones. This misalignment has grown. In 1989, there were 16,777 *more*

seats in main school buildings than students. By 2001, there were 26,623 *more* seats than there were students. Beyond district practices, confusing standards for overcrowding also create misleading statistics. For example, because of the Division for School Facilities formulas for determining standards for classroom capacity, two-thirds of auxiliary buildings created to relieve overcrowding are determined to be "overcrowded." Elementary school classes above third grade that reach the UFT contract maximum of 32 students are also determined to be overcrowded, no matter how much classroom space is available.

RECOMMENDATIONS:

√ **Given New York City's debt load, the capital budget cannot be expanded significantly. In order to end overcrowding, and thus improve student academic outcomes, increase the share of the city's capital budget for school construction to 40 percent from the current 30 percent share.**

√ **Reforms of state Building Aid:**

Eliminate the incentive for under-funding preventive maintenance;
Raise the cost ceiling for school construction in New York City; and
Revise the capacity formula for New York City schools.

√ **Hire outside consultants to conduct building capacity and utilization surveys as well as advise on better use of space.**

√ **Require each community school district to develop a plan to reduce school overcrowding.**

√ **Create three separate capital budgets for 1) Creating More Classrooms, 2) Capital Repairs and System Upgrades, and 3) Emergency Repairs. The capital budget for Creating More Classrooms should represent a 30 percent share of all capital allocations for school facilities. The creation and upgrading of science labs in high schools should have a high priority in the budget for Capital Repairs and System Upgrades.**

√ **Base two of these capital budgets, for classrooms and capital repairs, on objective, city-wide surveys of need, not a list of projects.**

√ **Ensure decision making by district and school staff as well as parents by providing each community school district and high school district with the services of an engineer or architect.**

√ **Quickly reform the city's capital budgeting and planning process for school facilities in anticipation of a state restructuring of school district funding.**

√ **Six low-cost strategies to end overcrowding:**

Reconfigure schools to reduce 45 percent of student overcrowding and create 24 new elementary schools in eight districts and five new high schools in Queens;
Create more new schools through leasing;
Build additional stories on school buildings or playgrounds;
Build more early childhood centers and mixed-use buildings;
Create year-round scheduling for some high schools;
Provide city tax credits for land donations where new schools are needed.

Introduction: Why School Overcrowding Matters

The recent "discovery" of project cost overruns now threatens to end any hope in the next three years of reducing student overcrowding.

So what is going on in this city? Mismanagement? Fraud? This EPP report on school facilities will be considerably different from others. After three years of interviews, visits to newly constructed schools, and a review of funding for capital projects, the Panel has arrived at the surprising conclusion that, despite the possibility of mismanagement and fraud, neither one is the central problem. There are no villains. At the end of the day, the central problem remains that there is not enough money to both end overcrowding and bring the schools up to a state of good repair. Given this backdrop of not enough resources, there has been a continuing competition for the resources that have been available. A confluence of parochial politics, narrowly focused strategies of facilities and budget staff, and unexamined assumptions have resulted in a set of goals for school facilities that undermine the main mission of the public school system — to educate children.

"Reforms" that change the agency that manages construction or that manages the school system will not automatically resolve a confusion of objectives or help children learn better.

Other reforms are being proposed, including mayoral control. The disclosures of cost overruns have given new impetus to efforts to give the Mayor a majority control of the Board of Education or abolish it. Among the 26 agencies that are members of the Educational Priorities Panel, there is no consensus as to whether the Board of Education should remain an independent agency. On the other hand, *there is a shared sense among our members that the continual debate around "governance" is postponing a far more important discussion of establishing priorities for the use of limited resources for school facilities*.

A hunger strike in Chicago suggests that a change in governance of the school system may not be the "magic bullet" that solves the facilities crisis. Parents in the Little Village neighborhood went on a seventeen-day hunger strike to get long-promised funding for a school in their neighborhood.[1] Mayor Richard M. Daley, who controls the Chicago school system, built fifteen schools over the last five years. But he promised many more new schools than he could deliver in the Chicago Public Schools' budget, a situation not that much different from the one in this city. The advantage of Chicago's governance system is that the finger pointing is directed at the Mayor, who made too many promises. In contrast, in New York City's more diffuse accountability system, there is a constant hunt for villains.

The premise of this report is that much of the planning process for building and repairing schools requires fundamental change, not a hunt for villains or merely a change in who builds the schools. If non educational objectives continue to guide key decision makers, a decade's worth of future investments in school facilities could result in very little improvement in the instructional environment for children by 2010.

Why We Wrote This Report The focus of this introduction is to explain why the elimination of student overcrowding — our objective in writing this report and our objective in seeking reforms of the school facilities construction process — must be the top priority for the city in the next decade.

[1] Information is from an interview with Andrea Lee of the Chicago-based Neighborhood Capital Budget Group, an organization that monitors capital budgeting and expenditures for public schools in that city.

We are now on the eve of a significant New York State Court of Appeals decision in a lawsuit brought by the Campaign for Fiscal Equity. The trial provided ample documentation that the state's system for funding schools does not provide a sound, basic education for New York City's children. Should a majority of justices agree with the January 2001 decision of Supreme Court Judge Leland DeGrasse, the legislature will be forced to craft a remedy that will drive an additional half a billion to two billion dollars more a year to the New York City school district. *Given a decade's long experience with the inability of the Board of Education to create additional classrooms, it is conceivable to EPP that the entire increase in state school aid to the city might be devoted to school facilities without resulting in much improvement in average class sizes or student achievement.*

A cautionary tale is the sorry experience of the Kansas City, Missouri school district. There was a massive investment in bringing schools up to a state of good repair as a result of a 1994 court decision. But for three years there was no parallel investment in instruction, and children's achievement levels on tests remained dismally low. *In hindsight, why would a new school roof increase children's math scores?* In the last year of sizable funding, a belated investment was made to reduce average class sizes in the early grades, which was too little and too late to make much of a difference.

New York City should learn from the mistakes made in Kansas City. We have some of the needed strategies for instructional improvements, but we lack the classrooms to fully implement them. Unless we make the necessary adjustments in the capital plan, and quickly, academic achievement levels will not increase significantly.

Smaller Class Sizes in the Early Grades In a state budget battle that extended into August 1997, the Assembly leadership was able to trade state funding for smaller class sizes from kindergarten to third grade, primarily benefiting urban districts, in return for the Governor's school property tax relief program, primarily benefiting suburban and rural parts of the state. EPP began to review the research on the remarkably positive effects of smaller class sizes on children's learning. While the relationship of improved academic performance above the fourth grade to class size is still in question, well-constructed studies in Tennessee and Wisconsin found that the "achievement gap" between students in high-poverty, urban schools and those in better-off districts lessened or closed by third grade. This was true, if and only if, children were placed in small class sizes from kindergarten or first grade and remained in small class sizes through third grade.[2]

The Panel was disappointed to learn that even after the end of three years, when funding was to increase to $225 million a year, only 60 percent of New York city's early-grade classrooms would be reduced to an average of 20 students. This initial disappointment faded when EPP realized that by the starting date of the funding, September 1999, there would not be *enough classrooms* in New York City to implement the program for 100 percent of the elementary schools.

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[2] Almost all the research analyses on the effects of smaller class sizes on student achievement are based on two carefully controlled studies: 1) Tennessee's Student Teacher Achievement Ratio (STAR) project used a true experimental design in the random assignment of students to different class sizes from 1985 to 1989 and 2) Wisconsin's Student Achievement Guarantee in Education (SAGE) program where there is an annual evaluation comparing schools with smaller classes with a control group. Information through the Internet about STAR is available at www.heros-inc.org and the most recent evaluation of SAGE is available at www.uwm.edu/Dept/CERAI/documents/cerai-00-34.html. A good summary of both studies is available by calling Keystone Research Center (717) 255-7181 to ask for a copy of *Smaller Classes,* a 1998 report by Alex Molnar. There have been several well-regarded analyses of one or both of these studies by other academics, who have concluded that smaller class sizes in the early grades appears to increase student achievement: Frederick Mosteller, *Tennessee Study of Class Size in the Early School Grades,* The Future of Children, 5(2), Summer/Fall 1995; Harold Wenglinsky, *When Money Matters*, Princeton, NJ, Educational Testing Service, November 1997; Alan Krueger and Diane Whitmore, *Would Smaller Class Sizes Help Close the Black-White Achievement Gap?* Brookings Institute January 2001; and David Grissmer, *Improving Student Achievement: What State NAEP Test Scores Tell Us*, Rand Issue Paper 924, July 2000.

A staggered implementation seemed the best option so that by the 2001-02 school year, the school system would have enough time to develop strategies to create more instructional space.

September 2001 has come around, *but the necessary classroom space has not been created despite the current $7 billion capital plan for the schools.* State funding for class sizes has remained frozen at $145 million annually for the last two years. While 31,780 children from five to eight years of age are now in average class sizes of 20 students, this number could have been *doubled* if school overcrowding had been significantly reduced. EPP came to the conclusion that, in order to provide New York City students with the "middle class advantage" of smaller classes, the need for additional classrooms was paramount. *Yet the Board of Education made little progress in creating these classrooms with five years of lead time. Why?* This question was the impetus for embarking on a study of school facilities.

The "Kansas City" Mistake — Could It Happen Here? Absolutely. There have been three five-year capital plans for school facilities since 1989. Even though they have been underfunded for the enormous task at hand, from July 1, 1989 to June 30, 2000, $10.5 billion has been expended for building new schools and repairing old ones. *The Educational Priorities Panel finds it perplexing that the New York City Board of Education has not made more progress in the reduction of overcrowding, the creation of more classrooms, and the renovation of science labs, supposedly top priorities in these plans. These are the capital projects that have a direct impact on learning.* Expenditures for 50 schools that have been built since 1989 total $1.6 billion, so hypothetically, 100 schools could have been built for $3.2 billion.[3] This would have eliminated all overcrowding as well as created sufficient classrooms to lower average class sizes in the early grades. Another mystery is the delay in upgrading science labs, especially in light of the fast-approaching deadline of 2005 when all high school students must pass a far more difficult science test in order to graduate. While the current capital plan allocates $57 million for science labs, Chancellor Levy has estimated that it will take a total of $500 million to create and upgrade science labs in middle and high schools.[4] This project remains on the "wish list," with little progress made in reducing the number of schools with non-existent labs.

The premise of this report is that educational objectives for facilities planning need to be given priority. Given the huge amount of resources required for the repair of school facilities, the politics of "fair share," a clash of professional values, faulty logic, and an unwillingness to make hard decisions, the "Kansas City" mistake could very easily be duplicated in New York City.

Note to reader on methodology: Because our focus is primarily on elementary schools, much of the analyses on overcrowding in the rest of the report is on elementary schools and, in some instances, community school districts. Only budget and building data include high schools. EPP's Monitoring Committee visited eight schools, seven of which were newly constructed and one which was a decade old. Two of these schools were Early Childhood Centers. Numerous officials were interviewed for this report, and we want to thank them for their efforts to guide us through many complicated issues and their willingness to supply us with data. In preparing this written report, EPP relied extensively on a review of funding, overcrowding, and construction data from 1989 to 2001, which helped to keep us grounded on *actual* expenditures, costs, and seats created. We have not used projections of future costs.

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[3] The average cost of $31,752,980 for new school construction is not adjusted for inflation. See Appendix 2, page A-60 for the cost of all newly constructed buildings since 1989. This calculation is from data supplied to EPP by the School Construction Authority, which does not include the cost of land, furniture, equipment, administrative overhead, and other costs.

[4] The Chancellor's Budget Request 2001-2002, issued April 2001, p.11. Earlier estimates were $300 million for science lab upgrades.

SECTION I UNDERSTANDING THE REAL ISSUES

Table I. Capital Expenditures: NYC Board of Education (BOE) FYs 1960 - 2001

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
City Total *	324	316	358	448	443	502	466	485	487	574	739	1,107	1,119	1,278
BOE Total *	61	67	75	91	110	140	139	112	98	91	133	190	212	255
% of Total	18.8	21.2	20.9	20.3	24.8	27.9	29.8	23.1	20.1	15.9	18	17.2	18.9	20
City Eff Ratio	11%	13%	13%	12%	10%	10%	11%	17%	22%	25%	29%	28%	27%	25%
BOE Eff Ratio	11%	14%	14%	11%	12%	10%	9%	15%	20%	22%	23%	25%	16%	18%

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
City Total *	1,581	1,687	894	691	521	626	836	1138	1295	1293	1524	1688	1733	1907
BOE Total *	274	242	127	67	40	54	91	90	108	122	125	152	134	135
% of Total	17.3	14.3	14.2	9.7	7.7	8.6	10.9	7.9	8.3	9.4	8.2	9	7.7	7.1
City Eff Ratio	27%	24%	19%	17%	NA	NA	NA	14%	16%	17%	15%	16%	15%	20%
BOE Eff Ratio	19%	15%	6%	6%	NA	NA	NA	4%	5%	3%	4%	5%	7%	10%

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
City Total *	2231	3142	3751	4233	3893	3617	3343	3741	3878	3858	4151	4841	4809	4233
BOE Total *	144	208	380	694	681	754	722	875	807	613	1233	1568	1296	694
% of Total	6.5	6.6	10.1	16.4	17.5	20.8	21.6	23.4	20.8	15.9	29.7	32.4	27	32.2
City Eff Ratio	19%	18%	18%	19%	19%	19%	18%	18%	18%	17%	15%	26%	29%	29%
BOE Eff Ratio	8%	1%	6%	0%	0%	2%	2%	2%	2%	2%	2%	3%	14%	9%

from the NYC Comptroller's Financial Statements (* in millions of dollars)

City and BOE Efficiency Ratios: The proportion of funds budgeted for the city (excluding BOE) that were not spent. The lower the percent of unspent funds, the more efficient. Expenditures for each fiscal year were compared to budgeted amounts for each fiscal year from the NYC Comptroller's Financial Statement. This was done to ascertain whether low Board of Education capital expenditures in any given year were due to an inability to spend what was budgeted, which can sometimes indicate problems in performance.

Budgeted amounts for Fiscal Years 1978 to 1980 were unavailable. EPP has been informed that prior to the financial crisis of 1975-6, standards for budgeting and preparation of the Financial Statement were considerably lower than current standards. For example, capital funding was often used for operating expenses. Therefore, prior to 1977, the Financial Statement may overstate expenditures for actual capital projects.

Chapter 1 Modest Progress amid Accusations of Fraud and Mismanagement

Year after year, when parents walk to school buildings crammed with students or covered by scaffolding, they wonder why the problem can't be solved. It is a reasonable question. *What is wrong with this city and its politics?* For parents and school staff, the seeming inability to ever get overcrowding reduced or repairs done leads to the suspicion that their children do not count for much in the political calculations of officials who make budget decisions.

Over the course of our review of school construction, the Educational Priorities Panel has taken a look at these issues, and we have come to more nuanced conclusions, some of which are very much at odds with parents' perceptions and the media's sensationalist portrayal of the "school facilities crisis." There has been modest progress in reducing overcrowding. Some of the problems cited by reports and the press are lacking any context and are more complex than they first appear to be because projections of future costs are used, rather than actual costs. The purpose of this chapter is to give the reader a more balanced picture of the school facilities planning process by looking at the past 13 years. The picture is a mixed one:

• **There has been an unheralded increase in investments in school buildings.** In the last decade, the Board of Education tripled its share of city capital spending. From 1977 to 1989, less than 10 percent of the city's capital expenditures were for schools. In 1990, Board of Education expenditures finally reached the 10 percent level. By the decade's end they represented 32.4 percent of the city's total capital expenditures. This dramatic increase has not registered with the public because newspaper reporters tend to cover the political drama of the unsuccessful efforts of Chancellors to get the level of funding they requested from various Mayors. Other commentators have focused on either substantiating or criticizing the Board of Education's funding requests. With too much of the spotlight placed on "the request," the city's impressive increase in actual spending for school facilities has been ignored. (See Table 1, opposite page)

• **The city, much less the Board of Education, does not have the resources to solve the entire school facilities crisis.** For 14 years following the city's fiscal crisis, there was little investment in repairing or maintaining schools, so many of them fell into disrepair. In 1984, student enrollment began to increase but an insufficient investment was made in building new schools. By 1989, when the first significant capital plan for the schools was adopted since the city's fiscal crisis in mid 1990s, schools were already overcrowded and the capital repair backlog was huge. By August 1998, the NYC Comptroller's office estimated that it would take $28 billion dollars over ten years to bring New York City schools up to a state of good repair.[5] This figure did not include an additional $2.8 billion the NYC Independent Budget Office estimates that it would take to create enough classrooms to reduce class sizes to an average of twenty students from kindergarten to the third grade.[6] To give some perspective as to what $30.6 billion represents, the city's FY 2001 total capital budget expenditures, extrapolated over ten years, adds up to $42.3 billion.[7] In order to solve both overcrowding and disrepair, 70 percent of *total* city capital expenditures would have to go to the schools. Since there is lack of resources to solve *both* overcrowding and disrepair, there should have been clear objectives for the spending of the limited

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[5] *Dilemma in the Millennium*, Office of the NYC Comptroller.
[6] *Inside the Budget*, Number 57, February 7, 2000. Also see *Memo to NYC Public Advocate Mark Green* dated August 24, 1998, (http://www.ibo.nyc.ny.us/iboreports/csrmemo.html) for different methods of computing these costs, though the cost estimates have been superceded by the February 2000 IBO report.
[7] The extrapolation is based on the Comprehensive Annual Financial Report of NYC Comptroller for Fiscal Year 2001, see Table 1. This does not account for inflation, but the estimate of $28 billion to repair the schools in the *Dilemma in the Millennium* was also not adjusted for inflation. EPP uses capital expenditure figures rather than capital budget figures because there is such a large discrepancy between what is budgeted and what is spent for city capital projects.

resources that were available. Instead, there were repeated promises about the construction of new schools but an increasing investment in making school repairs.

• As of the 1996-97 school year, student enrollment increases have leveled off, which should have allowed the building program an opportunity to make headway. The lack of progress in reducing severe overcrowding is often explained by the fact that immigration continued to grow and outpace efforts to build new schools. This was only true in the first capital plan (July 1989 to June 1994) and the first three years of the second capital plan (July 1994 to June 1996). Since then, however, enrollment has remained relatively flat.

Table 2. New York City Public School Enrollment Data (K-12)

	1990-91	1993-94	1996-97	1999-00
Total Enrollment	931,910	992,992	1,049,873	1,056,708

As this report will explain in subsequent chapters, the last two capital plans could have done more to catch up with enrollment growth. There were 247,994 students in overcrowded elementary schools (main school buildings) in 1989 out of a total enrollment of 465,258 students in main school buildings. Thirteen years later, there are 243,271 elementary school students in overcrowded main buildings out of a total enrollment of 514,887, a reduction of only 4,723 students (1.9 percent) in overcrowded elementary schools. The building program only kept pace with enrollment growth. The most significant area of progress was in the reduction of severe overcrowding (main buildings at or over 125 percent of utilization). In 1989, there were 72,914 students in severely overcrowded main school buildings. That number dropped to 36,221 by 2000-01.[8]

• In the last five years, new school construction has dropped by a third, despite increases in capital expenditures. From 1992 to 1996, 30 new schools were built, but from 1997 on, only 20 new schools have been built. There has been a parallel drop in seats created. 28,000 seats had been created by 1996, but in the second five years, the number dwindled to 17,000. Not accounting for the purchase of land, more than $1 billion was spent for new schools from 1992 to 1996 out of a total capital expenditure of $3.8 billion, or 26 percent of the total. In the second five-year period, only $640 million was spent for new schools out of a total capital expenditure of $5.4 billion, or 12 percent of the total. (See Table 10 and Charts 10A, 10B and 10C in Appendix 2.)

• "Skyrocketing" cost overruns for new school construction come down to unrealistically low estimates of the cost of building new schools. The July 2001 report by the Governor's Moreland Act Commission on New York City Schools, *Investigation into the Board of Education's $2 Billion Budget Gap for the First Two Years of the 2000-04 Capital Plan* found that the estimates in the capital plan for building new schools were so low that they were 59 percent below the contracts awarded to construction firms to build the schools.[9] In other words, no school could be built as cheaply as stated in the capital plan. Why were these original estimates so low? By grossly underestimating the cost of every new school itemized in each capital plan, each plan promised the construction of many more schools than could actually be built. Our assumption is that this was done to satisfy or pacify the largest possible number of elected officials and their constituents.

[8] EPP calculations from data in the NYC Board of Education 1988-89 and 2000-01 reports *School Facilities Enrollment - Capacity - Utilization.* See Appendix 1, Table 5.
[9] Page 22.

• Per-seat cost comparisons are complicated and often mix "apples and oranges." A February 4, 2002 bulletin issued by the NYC Independent Budget Office cites data from the American School & University's 27th Annual Official Education Construction Report showing that the cost per seat in New York City is 316 percent higher for new elementary schools and 414 percent higher for new high schools in New York than the median for the states of New York and New Jersey.[10] The IBO bulletin uses cost projections to estimate that each new elementary school seat will cost $78,812 and each new high school seat will cost $110,456. These cost projections are for projects that will be completed as late as 2004. IBO's numbers also include design, equipment, and furniture costs as well as an allocation for artwork and the possibility of an additional expenditure of 8 percent above estimates. The New York/New Jersey median costs of $24,256 and $25,209 per seat for elementary and high schools, respectively, are based on a look at projects *that have been completed, are not cost projections, and are limited to construction, not furniture and equipment costs.* Appendix 2 of this report, based on School Construction Authority data, provides a full range of historic data on the cost per seat for each type of construction, excluding such costs as furniture, land acquisition, and administration. The range is enormous, even for similar projects completed within the same year. In Table 10 C, we arrive an average cost per seat of for construction of new schools under the current capital plan of $40,548. (See page A-76). This is still higher than the median for New York and New Jersey, but not close to the range of 300 percent to 400 percent.[11]

• New school construction is more costly in New York City, but comparisons are often overstated. When EPP surveyed NYS Education Department data on capacity for Building Aid, we found a $47 million K-12 school in Columbia County, a $74 million high school in Niagara Falls City, a $45 million high school in Rome, a $30 million high school in Dutchess County, and a $88 million high school in Suffolk County. A report by the NYS Comptroller asserts that incentives in state Building Aid have driven up the costs of construction in the rest of the state.[12] This suggests that the high cost of building new schools may be a statewide problem. Nevertheless, actual construction costs for new schools are higher in New York City than in the rest of the state, but not as high as several reports would suggest. Based on EPP's review of school district capacity figures submitted to the State Education Department for Building Aid reimbursement, the average estimated new school building cost for the rest of the state from the 1995-96 fiscal year is $21,480,250.[13] From this same data source, the comparable average for new schools built in New York City during the same period to time is $44,073,490. School Construction Authority data provided to EPP show somewhat higher construction costs. From 1991 to 2001, new schools with up to 600 seats cost an average of $17 million, new schools from 601 seats to 1000 seats cost an average of $29.8 million, and those above 1000 seats cost an average of $53.6 million. (See Appendix 2, page A-60.)

• How to reduce costs, beyond eliminating waste and fraud, poses a set of complicated questions. Building a new school in New York City will always be higher than the rest of the state, because there is not enough land in most parts of the city to build a one-story building. Vertical construction is usually more expensive. But there are other factors that make

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[10] *School Construction Costs Soar More than 70 Percent Since 1999,* page1.

[11] The Independent Budget Office believes that these cost estimates for New York City are valid because EPP's analysis of SCA data does not include project specific costs other than construction. Furthermore, the main focus of IBO's bulletin was on increased costs of school construction in New York City. Nevertheless, most indexes of per square foot costs in the construction field are created to track or predict costs within a geographic location and carry a warning that they are not to be used to make comparisons among different geographic locations because of differences in how costs are computed for each geographic location.

[12] *School Construction and Building Aid: An On-Again, Off-Again Priority* issued by the Office of NYS Comptroller January 3, 2002.

[13] Based on data on school districts' Building Aid claims provided to EPP by the NYS Education Department in February 2002.

school construction expensive in New York City. Many school districts do not have specific building code standards for school buildings. In contrast, New York City has very exacting building codes. Should the city lower its building code standards for school construction? The School Construction Authority and the Board of Education have even higher standards for equipment and building materials than required by the building codes. Should these be lowered? In a relatively rare point of agreement, state and city school facilities professionals have acknowledged that New York City historically builds schools so that they last more than thirty years and require less maintenance. In EPP site visits to newly constructed schools, we saw wide hallways with enameled brick walls that will never require painting. Should hallways be narrower and the walls covered with plaster? In public testimony and in a 1999 interview by EPP members, Milo Reverso, SCA's former President and Chief Executive Officer, stated that he wanted reliable, well-established construction firms to bid for school construction projects. Should standards for the selection of construction firms be lowered? These series of questions are not meant to be provocative or lead to foregone conclusions. SCA has long been criticized for issuing bids to elite construction firms. Maybe some parts of the building codes or standards for purchasing equipment are not necessary. Elected officials and civic leaders need to understand, however, that there are tradeoffs in any concerted effort to lower the costs of new school construction.

• **The bureaucracies are not in disarray, but they are in constant combat with each other.** From the inception of the Board of Education shortly before the 20th century, there have been periodic eruptions of scandals about its building program. Commission reports and anecdotal evidence suggests that before the creation of the School Construction Agency in 1989, the Board of Education's efforts to build and repair schools were characterized by a pattern of corruption and inefficiency. This backdrop explains, to some extent, why the accusations that the Board of Education and the School Construction Authority make against each other are so highly charged and laced with innuendo about corruption, which is always a strong possibility in the construction industry. But on closer examination, the carefully choreographed exposés have come down to far less exciting issues, such as poorly drafted legislation, accounting difficulties and failures of disclosure, not the theft of taxpayer dollars. Here is EPP's analysis of the underlying facts of four stories that have made the newspaper headlines:

> *From 1989 to 1994, the Board of Education failed to submit timely claims for $300 million in state Building Aid.* This story of the Board of Education's "shameful inefficiency" began circulating in 1992, but resurfaces periodically whenever the state budget is adopted. There are a variety of reasons for the Board of Education's delays in submitting claims for state Building Aid, but one deserves special mention. From 1989 to 1994, poorly drafted state legislation made it technically impossible for the Board of Education to comply with information needed to receive state reimbursement for capital expenditures. State lawmakers naively assumed that a bond would be issued for each school or number of schools, so that the State Education Department would be able to calculate to the penny how much to reimburse the school district for payments of interest. But the reality is more complicated. The construction of each school is funded through a multitude of New York City general obligation bonds, all at slightly different interest rates. This created an accounting nightmare for the Board of Education staff because they could not arrive at a bond interest rate for each project as required by the poorly drafted law. Finally in 1994, the law was amended to remove this technical difficulty. The Board of Education was finally allowed to use a yearly average interest rate for the city's borrowing as the interest rate for each project.
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> *In the fall of 1998, the School Construction Authority was unable to account for $100 million in capital expenditures and Board of Education officials hinted that, possibly, millions were "missing."* The capital plan that was adopted in 1994 for fiscal years 1995-99 contained a promise that expenditures would be reconciled with the budget of the capital plan. The School Construction Authority had in place the usual safeguards for ensuring that

expenditures were for work in progress or completed, including random audits and a totaling of costs for each project. Nevertheless, the SCA seemed to have spent more than was authorized by the budget, even accounting for the usual cost overruns. Where was the money spent? Some of the funding was located in reserve accounts that some construction firms had required before completing the work. But an even larger amount had gone to completing projects in the first capital plan for 1989-94 than had been disclosed in budget documents. There had never really been $4 billion, as budgeted, available for the 1995-99 capital plan. "Missing" money boiled down to problems in reconciliation.

In July 2001, the Governor's Moreland Commission uncovered the "evaporation" of $2 billion of taxpayer money and charged that Board of Education officials "hid" enormous cost overruns from public officials and even its own Board members. This most recent episode could be termed "Accounting World War II." SCA officials were out for revenge for efforts by Board of Education officials to blow up reconciliation problems into a smear campaign against the Authority's integrity. Once again, many more projects were left over from the second capital plan than had been disclosed, so the $7 billion budget for the 1999-03 capital plan was really closer to $5.7 billion. When the certainty of cost overruns was factored in, projects that the capital plan estimated would be covered by $5 billion would really cost $5.7 billion. The Moreland Commission's documentation of the ridiculously low estimates for the construction of new schools and the high volume of undocumented changes in every capital plan was an open secret to everyone familiar with the capital planning process for the schools. The Board of Education's failure to refund the City Council for allocations for projects never completed was new information. So was the fact that Board of Education officials had counted this money twice in presenting its $7 billion capital budget. These, indeed, were duplicitous accounting tricks, but the only money that was "missing" was in budget documents.

In March 2002, an internal Board of Education memorandum, dated January 25th, was selectively "leaked" to reporters at CBS television news and the New York Times charging that the SCA wastes $460 to $920 million in the capital plan. The 68-page memo was essentially an answer to the July Moreland Commission report, laying much of the blame on cost overruns on the other agency. The SCA construction fees were viewed as excessive. Some of the other faults cited in the report, if "corrected," could lead to a slower pace for building new schools and making repairs and more headaches for school staff. The memo faulted the SCA's effort to get school repairs and construction done as quickly as possible and alleged that this effort at speed was driving up costs. Scheduling all repair projects in a school at the same time, called "bundling," so there would be only a one-time disruption of school activities was viewed as costly and leaving the Board of Education open to charges that it is not able to budget projects accurately. The memo's main assertion was that the School Construction Authority does not treat the Board of Education as a client, a long standing complaint. The cumulative impact of the memo, which provided many examples of the other agency's charges and construction practices, painted a picture of an extravagant agency.

The problem with this constant volley of charges and countercharges between these two agencies is that it is now undermining the public perception of the school capital planning process in New York City and eroding political support additional funding. Both agencies are being damaged.

Chapter 2 The Political Process Makes It Difficult to Target Capital Resources Where They Are Most Needed

Politicians care too much, not too little, about school facilities. Their intense, bare-knuckled competition for limited capital funds has resulted in capital plans that promise too much and are purposefully difficult to track. EPP has learned through interviews with borough presidents and members of the city and state legislatures that building and repairing schools are among their highest priorities, far outdistancing other more complex education issues. Each Borough President dedicates substantial staff to tracking construction and repair projects. Members of the NYC Council also pay close attention to capital projects within their districts, so much so that capital funding for these projects are key bargaining chips in negotiations leading up to the adoption of the city budget. In part, the commitment of these elected officials reflects the volume of complaints by parents, community leaders, and school officials. But we have also found that there is a personal dimension to their years of work in trying to get schools built in their districts. To put it succinctly, getting repairs done is proof that they are effective public servants, and the construction of a new school ranks in their eyes as a lasting achievement. Unfortunately, their fierce competition for capital funds leads to unintended consequences.

Recent reports have all made reference to the fact that the lists of projects in each Board of Education capital plan are deceptive. Many of the projects will fall by the wayside, while others are inserted. What appears in black ink could just as well have been written in disappearing ink. As early as March 2001, NYC Comptroller Alan Hevesi issued an audit report on the performance of school construction work that stated that the capital plans for the schools were frequently changed, but amended only just before the next capital plan was adopted, a violation of state law.[14] Why are the long lists of projects in the capital plan so deceptive? Why did so few participants in the process notice that the capital plans were being amended only every five years rather than every three months?

The answer to these mysteries is that meaningless lists were a *solution.* They were not meant for public consumption, because the average New Yorker would not have access to the capital plan. The were meant to *deceive* City Councilmembers and state legislators. It is the political process itself that has encouraged the creation of voluminous, but misleading, itemization of capital repairs and new construction projects. It is instructive to look at this political process more closely, which is the purpose of this chapter. Legislators are not the villains, but simply working hard for their constituents. Their hard work, however, has resulted in "plans" that are meaningless. Worse still, their concept of "fair share" means that building new schools will not be addressed as a priority, even though each new plan is funded for this purpose.

• "Fair share" results in fictitious capital plans and dissipation of funding where the needs are greatest. When the Chancellor's staff prepares the preliminary draft proposal for the Board of Education's five-year capital plan, hearings are then held by every community school board on the draft. In 1998, EPP monitored these required hearings. We found that, in some districts, dozens of parents showed up to support the plan or complain that it did not include a repair problem in their school, while in others the "hearing" was a barely noticed agenda item in the usual monthly meeting. The real audience for the preliminary plan, however, is the City Council. In order to gain legislative support for a capital plan that will require billions of dollars of city borrowing, numerous projects in every City Council district are included in the plan.

City Councilmembers as well as Borough Presidents have an intensely parochial interest in the schools' capital plan. Is their district or borough getting a "fair share" of the funding? A more objective definition of "fairness" would be to drive funds to where they are needed most. But the

[14] NYC Office of the Comptroller Bureau of Engineering, March 12, audit report EW99-163A.

immediate political problem facing the Chancellor, or for that matter, any one who is in charge of the school system, is how to get the plan approved if a sizable number of Councilmembers believe that their districts are getting the short end of the stick. They are elected to represent *their* districts, not the city as a whole.

The politics of scarcity cannot be underestimated. Because there was a period of "deferred maintenance" from 1976 until 1990, every Councilmember faces complaints from principals and parents about long-delayed upgrades of auditoriums or flooded basements. Nevertheless, these problems may be less severe than problems of overcrowding that directly impact instruction. Appeals to parochialism tend to win out over careful targeting every time because of the exigencies of getting the plan approved. Also "fair share" needs to be qualified. Powerful City Council leaders tend to get a bigger "share." It has been said that one committee chair never had an electrical socket that was out of place in the schools in his district.

Yet when the plans are approved, they are accompanied by rhetoric that the plan will make significant headway in solving overcrowding. *No plan will be approved, however, if most of the funding goes to solving the biggest problem because then only a handful of legislators' districts will benefit.* So funding that could be used for this purpose is dissipated into hundreds of projects that may be necessary but will not create more classrooms. This explains why every capital plan promises to end severe overcrowding in Queens and parts of Brooklyn, and Manhattan and the Bronx, and why these overcrowding conditions have continued through three five-year plans and the expenditure of $10.5 billion.

It is instructive to look at this same political logic at work in capital funding initiatives that have not come from the Board of Education. Even though he represented a district in Queens, a borough where severe overcrowding is at a crisis point, former Council Speaker Vallone's two efforts to provide more facilities funding required a "fair share" concept in order to succeed. His $1.4 billion addition to the capital plan, as originally proposed in 1996, would have divided the funding equally among Council districts, a far worse distribution of funding than existed in the Board of Education's capital plan. Ultimately, he was forced to adhere to some priorities, but, as a compromise, additional money also went for the purchase of schoolbooks in every Council district. His next initiative, which was adopted in June 2000 to provide funding to build five schools, went to all five boroughs, including Staten Island which has no severe overcrowding conditions.

Coping strategies were in violation of budget honesty and the law. Board of Education staff have had two mechanisms to cope with legislators' demand for a "fair share" of capital funding:

> Almost one third of the projects listed in its plans, by some estimates, will never be undertaken. The Moreland Commission has listened to the School Construction Authority's long-standing complaint that new projects, not listed in the capital plan, are included while others are quietly eliminated. Still other phantom projects will survive on paper and then be "rolled over" to the next capital plan (and the next). The Moreland Commission has also exposed the fact that specific project money provided by the City Council outside of the Board of Education's capital plan, Resolution A projects, has been spent on projects other than those designated.[15] *This covert nullification of "fair share" is duplicitous, but in some cases, it drives funding to where it is most needed.* Resolution-A projects, in particular, very often reflect favoritism or outright political pork. For example, in one district familiar to an EPP member representative, a Councilmember provided funding for air conditioning for one school despite far more pressing repair problems in other schools in his district.

[15] These are often called "Reso-A" projects, shorthand for where they appear in the order of budget resolutions adopted by the City Council.

The Moreland Commission hints that nefarious "political deals" were involved in the high-volume substitution of so many projects in each capital plan. Some of these suspicions may be founded in truth, but the lack of examples in the July 2001 report may be telling. In the last capital plan, a court order resulting from a lawsuit by the United Federation of Teachers compelled the Board of Education to make most long-delayed emergency repairs of schools. Some of the volume of substitutions in the last plan reflected this court order.[16] *In essence, the judicial branch of government forced the targeting of resources that the legislative and the executive branches of government subverted.*

The costs of repair projects and, in particular, the construction of new schools are purposefully underestimated. This allows the Board of Education to list as many projects as possible in its capital plan, which leaves City Councilmembers relatively satisfied that each of their districts has several projects and will receive a "fair share." In addition, this underestimation allows the Board of Education staff to convince city officials that their newest plan, which always requires more city borrowing, will finally make a significant dent in severe overcrowding. Ironically, this technique was also a convenient fiction for Mayors Dinkins and Giuliani. Their reductions of the initial, higher requests for funding have had few consequences. The public was shielded from the truth that, when capital plans were funded at one-third less than initially requested, severe overcrowding would persist another five years.

Changes in projects were supposed to require amendments to the Board of Education capital plan. Cost overruns exceeding 10 percent were also supposed to require amendments. Since the estimates for construction of new schools were ridiculously low, cost overruns averaged 40 percent over projections from the minute contracts to build schools were signed. Yet, in violation of the law, the Board of Education's capital plans were amended only at the end of the five-year period. The best explanation is that the Board of Education and the Mayor needed to continue these two coping mechanisms. Legislators could be placated so long as there was an obfuscation of decisions about which projects would actually be funded.

Now that the Board of Education's actions have been "exposed," the consequences may be worse. In having to file amendments for each new and eliminated project, the pressures for a "fair share" for each Councilmember's district might increase, not decrease. Instead of there being a political battle over limited resources every five years, there could be a battle every three months when the Board of Education amends its capital plan. In short, there may be even *less* targeting to districts with the greatest needs. In the third section of this report, we outline a strategy that would ensure legislators that their constituents are being treated fairly.

[16] This is based on the opinion of a former Board of Education official, who believes that the section of the capital plan budget for "Emergencies" was the source of the funds for court-ordered repairs. EPP has been unable to get corroboration for this opinion.

Chapter 3 The Values of Facilities Professionals Have Displaced Those of Educators

Fights at meetings of the Board of Education and City Council over which borough will get the most new schools captures newspaper headlines. But one of the findings of EPP's review of expenditure data is that the Board of Education has adopted a policy of building fewer schools, which has received little, if any, newspaper coverage. Though overcrowding remains unabated, new school construction has dropped by a third over the last five years. Despite a steady increase in capital funding, fewer schools are being built. (See Tables 10A, 10B, and 10C in Appendix 2.), From the first capital plan adopted in 1989, it was clear that there were not enough resources to build new schools and repair old ones. Yet, 29 percent of budgeted capital funding from 1989 to 1994 was for new school construction. The capital plan for 2000 to 2004 budgets only 18 percent for new school construction. *Over the last five years, actual expenditures for new schools (not merely budgeted) have fallen to 12 percent.* Repairing old schools has become the main priority of the Board of Education and building new schools became a secondary priority by the middle of the last decade.

This chapter will explain why this happened. There are no nefarious villains behind this change, because there are rational explanations for why this choice was made as well as reasons why the consequences of this choice have not been made more clear. From the point of view of facilities professionals, there are two paradoxes in the Board of Education's capital plan: 1) Given the historic up-and-down cycles of immigration and school enrollment, why use limited capital resources on building new schools when old ones are falling apart? 2) Is there public and political support for an ambitious program for capital repairs? The problem with these questions is the assumption that buildings are more important than children and the quality of their education.

• **Why use limited capital resources on building new schools when old ones are falling apart?** A series of reports by the Citizens Budget Commission from 1994 have summarized one of two paradoxes that face facilities professionals at the Board of Education: there are insufficient resources to maintain the current physical plant and bring it up to a state of good repair, so the building of new schools will only stretch inadequate resources further. *Why expand the number of schools when even the current number cannot be properly maintained?* The CBC's solution was "to use buildings more productively" by moving schools to year-round schedules to accommodate one third more students. In other words, abandon efforts to build new schools.

Unexamined in this paradox is whether, given inadequate resources, bringing facilities up to a state of good repair should this be the first objective of a school system whose primary problem is low student achievement. At the time the first CBC report was written, the State Education Department was phasing in the most rigorous testing standards in the nation for fourth, sixth, eighth grade and high school students. Formerly many elementary school students simply filled out blanks in workbooks. Now eight-year olds are required to write an essay based on a passage read to them by their teacher. Unprecedented in the nation's history, pre-collegiate standards of academic preparation have been imposed on <u>all</u> high school students. The New York City business community championed these changes. Yet like their counterparts in Kansas City, some of their civic representatives stressed that building repairs should be the primary objective of the capital plan and capacity building for better instruction should be abandoned.

Even before the publication of the Citizens Budget Commission's first report, the Board of Education was already in the process of upgrading its objectives for its capital planning from coping with building emergencies to an ambitious standard of bringing the physical plant up to a state of good repair. In 1994, Chancellor Cortines convened the Commission on School Facilities and Maintenance Reform, whose membership included the heads of building trades unions,

officials of the Real Estate Board and their key facilities managers, and academics and former high-ranking government officials.[17] The report that was issued in June 1995 argued persuasively that many school buildings needed complete replacements of roofs and façade rehabilitation, not mere patch-up repairs. Saving the "envelopes" of buildings so that they were water-tight became a goal. State Education Department facilities professionals also applauded the effort to stabilize old buildings so that the New York City school district would not have to face the prospect of having 47 school buildings a year deteriorate into an unacceptable condition, which was the dire warning of the Commission.[18]

From the perspective of facilities professionals, these goals are logical. More than once, school buildings that had been newly plastered and painted saw these repairs ruined within a year as leaks once again reappeared. Even patched-up roofs were no guarantee against water damage, as buildings with old façades developed damp and falling plaster on interior walls. Facilities professionals succeeded in expanding a cost-effective strategy for some heavily deteriorated buildings into an ambitious plan based on replacement cycles for new roofs and façades for many more schools. Under the policy guidance of the Commission, the capital plan went from coping with repair needs that were visible to school staff, students and parents to repair needs that were identified by facilities professionals and that were far less visible. These professionals wanted to prevent problems before they started, an admirable goal. But in the zero-sum game of budgets, this meant taking away resources targeted to overcrowding.

• Is there public and political support for an ambitious program for capital support? No one likes buildings in disrepair, but getting funds for upgrading New York City's decaying infrastructure is probably not "sexy" enough to get widespread support. The Chair of the Commission, Harold O. Levy, made numerous presentations to civic groups in attempt to build support for building repairs. He predicted that the death of a child from a falling brick would finally lead to public support for a repair program. Unfortunately, two years later, a falling brick killed a young woman in a poorly supervised SCA repair project. The conduct of the school repair program once again became the issue, rather than the need for repairs. It is doubtful that a five-year capital plan would be funded at close to $7 billion for an ambitious repair program. For this reason, ending "the crisis of overcrowding" became an elusive carrot dangled in front of elected officials. Actually ending overcrowding, on the other hand, would have resulted in a reduction of capital funds for repairs. Funding was solicited to "solve the overcrowding crisis," but an increasingly higher proportion of expenditures went to repairs than in creating more classroom space. *The continuing crisis provided the rationale for billions of additional city borrowing, but in actuality facilities professionals were using a larger and larger share for more extensive, preventive repairs.*

In some sense, this was a politically astute strategy. Throughout the rest of the city agencies, many facilities are far from the standard of "good repair," much to the angst of facilities professionals in those agencies. Many police station houses, for example, have extensive water damage and poorly functioning ventilation and heating systems. Even though reducing crime was the prime objective of Mayors Dinkins and Giuliani, no sizeable investment was made in repairing police station houses until 1997. Obviously, there is no relationship between crime reduction and the state of repair of police facilities. Such clarity was not in evidence to the members of the Board of Education, so facilities professionals seized an opportunity to repair the schools, which, in an ideal world, *should be their primary objective.*

• Though capital building repairs should continue to get the majority of capital funds, the priority should be to end overcrowding. There is no doubt that buildings in

[17] The full list appears in Appendix F of the Commission's 1995 report, which includes Edward Cleary, Yolanda Moses, Jack Rudin, James Tisch, and Fred Wilpon. Harold O. Levy chaired the Commission.
[18] June 1995 report, p.6.

disrepair affect the morale of students and teachers. But rehabilitating facilities will not, through some magical transformation, improve instruction. Real life is more complex and contradictory than in Hollywood movies, where heroic principals and new coats of paint turn around schools in a matter of weeks. EPP members have visited pristine schools where student achievement was low and instructional practices were questionable, and we have visited dark and dingy schools with major repair problems where student achievement was high and the staff was focused on learning. *The education system's biggest crisis is not the state of its facilities, but its difficulty in raising student achievement in two-thirds of its schools. This instructional crisis will only get worse unless facilities planning becomes better focused on instructional objectives.*

In the third section of this report, we offer a means by which the values of facilities professionals can be balanced with those of educators. The current physical infrastructure of the schools should not be allowed to deteriorate further, but these repair needs should be balanced with the need to reduce overcrowding. But what is the proper balance between the need to build new schools and fix old ones? We go back to the first capital plan adopted in 1989 to a budget formula of 70 percent for repairs and 30 percent for the construction of new schools.

The political problem, of course, remains as to whether the city will continue to fund the Board of Education's capital plan once the overcrowding crisis is solved. It is beyond the scope of this report, but the Board of Education needs a reliable stream of revenue not only to make capital repairs but to correct minor repairs before they become major. Absent these reliable annual revenues, the temptation to exploit the crisis of overcrowding in order to get more repair funding will once again emerge.

Chapter 4 Cost Savings Drive Policy, Not Educational Effectiveness

Saving the taxpayer money and stretching each penny is the daily task of the numerous budget policy makers and technicians who struggle to close city funding gaps each year, despite the odds. Saving the city money is a praiseworthy goal. Budget directors and their staff in all branches of government are the guardians of the public purse. Their professional value system is focused on minimizing costs. But in the absence of a clear city funding policy to raise student achievement levels, a cost containment approach to education has continued. Budget staff may be saving money while at the same time inadvertently sacrificing educational quality and effectiveness.

A February 1972 report, *New York City School Construction: Too Little, Too Late and Much Too Expensive,* by the United Parents Associations, made some of the same complaints about meaningless lists of projects and the delayed construction of new schools that are problems 30 years later.[19] The report described the powerful role that the Mayor's Bureau of the Budget played in the facilities planning process before it was replaced by the Mayor's Office of Management and the Budget. BOB not only made the final decisions about which projects were to be funded, but they were also in charge of determining the sites for new buildings, estimating the cost of each project, and even approving architects' designs. Today, OMB does not play such a prominent decision making role in capital construction, but this agency along with the budget staff members of the Board of Education not only sign off on projects, but guide the planning process in ways that save the most money. For these professionals, there are significant cost savings in building fewer schools, shifting more of the capital funding towards repairs, and allowing student overcrowding to persist. These are the incentives:

• **New York City receives more state Building Aid reimbursement for capital repairs than it receives for building new schools.** The public and even some Councilmembers are not aware that the city's four-year capital budget, which now exceeds $20 billion, reflects not only the city's borrowing but also additional revenue from state and federal governments for capital projects for school facilities, transportation, hospitals, and housing. City budget staff attempt to maximize funding and reimbursements from other levels of government so as to minimize the *net costs* to the city for capital projects. As will be further discussed in Chapter 6, state Building Aid provides reimbursement of, on average, 64¢ on the dollar for expenditures for capital repair projects, but the Board of Education only gets reimbursement of 25¢ to 37¢ on the dollar for expenditures for the construction of new schools. The net costs to the city of building a new school are thus much higher than the net costs of a capital repair project. The steady decrease in capital expenditures for new schools, from the point of budget professionals, has been advantageous to the city's bottom line.

New York City maximizes state Building Aid by building schools with large class sizes. As one school facilities planner told EPP, the aim is to "build to capacity." It is well known that New York City classrooms contain more students than in the rest of the state and the nation. In 1997-98 New York City elementary classes contained five more students than in the rest of the state and high school classes contained seven more students . For example, in grades 1 to 6, the average class size in New York City is 27.3 students and in English grade 9, 28.9 students, while the comparable averages for the rest of the state, excluding the big city districts, is 23.6 and 24 students respectively.[20] State Building Aid rewards districts that build standard size classrooms by

[19] Available in Special Collections, Milbank Memorial Library, Teachers College, Columbia University.
[20] The New York State Education Department, *New York State of Learning, Statewide Profile*, April 1999, p. 26 and p31. See also National Center for Education Statistics report *Digest of Education Statistics 2001*. US ED, OERI, 2002, p. 80. The national average is 24.1 and 23.6 for elementary and high school classes, respectively.

giving those areas the highest amount of state Building Aid "points."[21] The standard size classroom used to have an expectation of 27 pupils per classroom. This is no longer the case, and districts routinely build classrooms that are standard size and also aim for average class sizes of 20-24. New York City, however, continues to operate as though state aid still carried the expectation of a high class size. *Per-seat construction costs would be even higher if New York City followed the policy of the other school districts in the state.* Yet it is also true that the smaller class size policies of these other districts helps to explain why their students are doing better academically and why they are better able to retain experienced teachers.

• **Per capita, overcrowded schools are less expensive to operate.** As of 2001, the system has nearly a quarter of a million children in overcrowded elementary school main buildings (See Appendix 1, Table 4) and approximately 71,000 students in overcrowded middle schools (See Appendix 1, Table 16). The lack of interest in reducing overcrowding may be explained by the fact that overcrowded schools are less expensive to operate. In the set of elementary schools from which the above sample below is drawn, more than two-thirds, 444 out of 676, are operating at or above 100% utilization. A closer examination of a random sample of 30 elementary school buildings show that operating costs per student decrease as utilization increases.[22] The sample is divided into quintiles. As utilization increases from the 1st quintile (66 percent) to the 5th quintile (130 percent utilization or overcrowded), the operating cost per pupil decreases. There are exceptions: one school at 109% utilization is more expensive to operate ($10,685 per student) than another less crowded school (84% capacity) which costs $8,358 to operate.

Table 3. Building Capacity and Per Pupil Operating Cost

	Average Building Capacity	Per Pupil Operating Cost
1st quintile	66%	$ 12,417
2nd quintile	88%	$ 9,951
3rd quintile	105%	$ 9,189
4th quintile	113%	$ 8,638
5th quintile	130%	$ 7,704

To sum up, it is possible that the cost savings associated with overcrowded schools may appear attractive to budget professionals. The preceding analysis of costs associated with building and operating new schools may shed light on some of the underlying principles guiding educational decision-making in the city. When looked at strictly from the point of view of minimizing costs, overcrowded schools appear to be more cost-effective.

The debate surrounding New York Police Department deployment of its officers offers insight on the wisdom of letting cost-cutting measures drive policy decisions. All through the 1970s and '80s there was an ongoing controversy over how many officers should ride in a New York Police Department patrol car. One group, the Citizens Budget Commission (CBC), proposed that the city could save significant funds by switching from two officers per car to one. This debate has been moot now for over a decade, but the interesting point is *why* it is moot. No one disputed the CBC's assertion that one officer per car would cost less than two. Instead, beginning with the Dinkins administration and extending into the Giuliani administration, a broader, more profound question overrode the "one officer versus two" cost debate. The question was: How do we reduce the crime rate in the city? Once that became the goal, creative, if more expensive, solutions were

[21] The standard size is 770 square feet for grades 2-12, and 900 square feet for Pre-Kindergarten and Kindergarten classrooms. State aid "points" are technically referred to as "aidable units," or in the aggregate, "rated capacity." We will say more about state Building Aid in Chapter 6.

[22] Operating costs are from the Board of Education's *School Based Expenditure Reports, Fiscal Year 1999-2000.* New York, NYC BOE, Jan. 2001.

effected. The successful community policing program, in which officers walk a neighborhood beat, was implemented. Conversations about how to minimize costs at the NYPD continued to take place each budget season, but now they occurred *within the framework of reducing the citywide crime rate*. Herein lies a lesson for the Board of Education, and all others charged with decision-making power over the city's public schools.

Decisions based on cost savings alone will not accomplish key educational goals. Instead, city administrators should follow the example set by the Police Department. The framework within which budget decisions are made ought to reflect the city's goals in public education: how can we improve the public schools, for example, by raising the performance levels of our students? With this as the framework, creative solutions may be found. The data on student performance suggest more than one solution (just as the data on crime reduction certainly suggested methods other than re instituting neighborhood beats.) We do know that smaller class sizes in the early grades can have a significant and lasting impact on student learning, particularly for minority students. The point here is that there are creative solutions available, once city leaders refocus on educational goals.

SECTION II

OTHER REASONS FOR THE PERSISTENCE OF OVERCROWDING

Chapter 5 Escalating City Debt Load Limits Solutions

Considerable forces, both at the highest levels of city government and the business community, are allied against a school construction program that is too ambitious. This "conspiracy," however, is not aimed at children or based on bias. Those who oppose the Board of Education's capital budget have sound financial reasons for doing so. Most of these fiscally conservative business and government officials oppose *any* increase in New York City's capital budget because of their concerns about the huge debt load that the city is carrying. Their concerns are not that much different from a bank or mortgage lender's worry that a family with too large a mortgage should not be allowed to borrow more. While some couples nearing retirement have paid off their original home mortgages, others in the same age bracket kept on refinancing their mortgages so that the principal that they owe has remained the same or has grown, and they face thirty more years of monthly interest payments. New York City's borrowing profile is similar to older couples who are steeped in debt.

This chapter will provide an overview of some of the commentary by fiscal monitors on New York City's debt. *This issue is relevant to the discussion of efforts to end overcrowding because there is a constant debate about whether the city can "afford" to build new schools.* There are a considerable number of "red herrings" that emerge in these debates, but there are also some sobering comparisons of how New York City's debt load compares with that of other cities.

• New York City is at the state constitution's limit for borrowing. Many states, including New York, have constitutions or laws that limit the amount of borrowing by local governments. The fear is that elected officials, who are in office for only a short period of time, will be tempted to start a popular and ambitious building program and then leave the repayment of the debt to their successors in office. This worry is especially relevant now, because city elected officials cannot serve beyond two terms of office. "Debt load" needs to be qualified. Limits placed on government borrowing are lower than the standard for individuals. While the rule of thumb by lenders is that a family's mortgage payments should not represent more than a quarter or a third of the family's monthly income, limitations on indebtedness by local governments are much lower. New York State's constitution does not allow city debt to exceed 10 percent of the value of the city's real estate property within the city's borders.

For years, the fiscal monitors issued dire warnings that the city was going to reach this ceiling. In 1997, this happened and the sky did not fall. Without much fanfare, the state legislature allowed the city to create the Transitional Finance Authority in order to issue $7.5 billion in bonds above the limit set by the state constitution.[23] Why was there so little fanfare? Mayor Giuliani's staff was able to convince legislators that the constitution's debt limit was written before New York City began to tax personal income, so debt capacity should no longer be linked solely to the capacity to pay back debt from real estate tax revenue alone. It was easier for the legislature to create another fictitious independent authority that could issue bonds, which would not count towards the city's debt limit, than it was to amend the language of the state constitution.

• Annual debt service will consume an ever larger proportion of the city's annual expense budget. When all the city's fiscal monitors analyze the projections of the city's overall budget over the next four years, they look at what portion of the city's expense budget has to go to debt service, that is, payments to bondholders for interest and repayment of principal. From the mid-1980's on, these monitors have raised alarm over projections that yearly debt service will

[23] *What Makes New York City Run?* Published by the League of Women Voters of the City of New York Education Fund, p.50. Near the close of the 2000 state legislative session, the authorization was increased by another $4 billion. TFA bonds are backed by revenues from the city's income taxes. General obligation bonds are backed by property tax revenues. A NYC Independent Budget Office News Fax 89, *World Trade Center Disaster,* issued September 28, 2001, reports that the state raised the TFA borrowing limit by another $2.5 billion after 9/11 for a total limit on borrowing of $14 billion.

consume as much as 20 percent of the city's property tax revenues, crowding out available funding for police, education, and other vital services. So far, year after year, these fearful projections have not materialized, because the city refinances its debt in order to reduce interest rates.[24] This is akin, however, to refinancing a mortgage in order to reduce monthly mortgage payments. While sometimes it is a matter of merely getting a lower interest rate, the time period within which the mortgage has to be repaid is also stretched out, which, in turn, increases the amount of debt.

Fiscally conservative monitors of the budget want mayors to pay down city debt and to borrow (and build) as little as possible. But, Mayors Koch, Dinkins and Giuliani found it politically advantageous to continue to issue city bonds in order to increase the city's capital budget and to stretch out the debt so as to lower the proportion of debt service in the city's annual expense budget. *If they had followed the advice of conservative fiscal monitors, overcrowding in the schools would be even worse.* On the other side of this never-ending debate, whether to pay down the debt or stretch it out, are those who champion an even greater investment in the city's aging infrastructure of schools, transportation, hospitals, roads, and housing. Sometimes the debate goes on within one agency, such as the Office of the Comptroller, which, in one year, issued one report championing paying down the debt and another one pointing out the critical need to shore up the city's infrastructure.

• Comparisons to other large municipalities show that New York City's debt load is significantly larger than most cities. The Panel has taken a jaundiced eye toward alarmist warnings about the state constitution's debt limit and ballooning future debt service payments because these warnings have provided incomplete information. For EPP, the most salient argument that New York City should not expand its capital budget significantly comes from comparisons to other large municipalities. Every year, the Office of the Comptroller issues a *Capital Debt and Obligations Report* which shows that New York City's outstanding debt, even when accounting for its 7.2 million residents, is more than twice as large as other cities.

Because we were shocked by these municipal comparisons, EPP had a consultant take a closer look at the 1999 *Capital Debt and Obligations Report*. In 1998, the municipal debt for each resident of the 13 other cities came to a combined average of $1,629. In the same year, the debt per capita for New York City came to $4,400. The EPP consultant was then asked to look at the local revenue per capita because fiscally conservative arguments tend to ignore New York's higher than average revenues due to both regional cost differences and the wealth of Manhattan. The additional information on local revenues on a per-capita basis provided a more balanced picture. Our consultant then created a ratio of outstanding debt to local annual revenues for five other cities, adjusted for population size. The resulting comparisons, though not as extreme as that New York City's ratio of debt to revenue, are higher than most other cities except Minneapolis. (See Table 4, next page.)

EPP then compared the ratio of debt to revenues (accounting for population differences) for the five largest cities in our state. Once again, the comparisons are not comforting. The ratios of debt to revenues do not compare favorably with the average of the selected American cities. Even then, New York City still has the highest ratio in this group of New York cities. (See Table 5, next page.)

Some of the differences between New York City and other large municipalities are not as big as they appear in these charts because two-thirds of our city's debt is funded by general obligation bonds (that is, backed by city tax revenues), while in most other cities the proportion of general obligation bond debt is less than half. These cities rely more on enterprise or special

[24] The annual *Message of the Mayor*, which is issued with the Mayor's Executive Budget, contains a section called "Financing Program" that details the extent to which the city has refinanced its debt in the preceding year.

revenue funds (where user fees repay bond holders) that do not count towards the cities' debt on their ledger books.

Table 4. Revenues Per Capita and Debt Per Capita Measures for Selected American Cities, 1998

	Population	Total Local Revenues	Direct and Overlapping Debt Outstanding	Revenue Per Capita	Debt Per Capita	Percent Debt/ Revenue Per Capita
Minneapolis	368,383	512,309	921,487	1,391	2,501	179.8
Chicago	2,783,726	5,881,100	6,459,526	2,113	2,320	109.8
Philadelphia	1,451,372	3,048,100	2,988,863	2,100	2,059	98.1
Los Angeles	3,722,500	5,080,923	5,415,496	1,365	1,455	106.6
Boston	558,000	996,200	654,374	1,785	1,173	65.7
Average of All Other Cities *	1,776,796	4,553,550	4,860,806	2,563	2,736	106.7
New York City	7,342,636	23,245,000	32,304,000	3,166	4,400	139

* Figure represents a population-weighted average.

Table 5. Revenues Per Capita and Debt Per Capita Measures for Selected Cities in New York State, 1998

	Population	Total Local Revenues	Direct and Overlapping Debt Outstanding	Revenue Per Capita	Debt Per Capita	Percent Debt/ Revenue Per Capita
Rochester	230,356	332,535	319,589	1,444	1,387	96.1
Buffalo	328,175	331,366	422,345	1,010	1,287	127.4
Syracuse	163,860	177,598	220,581	1,084	1,346	124.2
Yonkers	188,082	212,343	199,294	1,129	1,060	93.9
Average of All Other Cities *	227,618	279,400	313,958	1,227	1,379	112.4
New York City	7,342,636	23,245,000	32,304,000	3,166	4,400	139

* Figure represents a population-weighted average.

A report by the Citizens Budget Commission, *An Affordable Debt Policy for New York State and New York City*, states that an economic recession could cause a sharper decline in the city's capacity to repay debt than in the rest of the country.[25] The likelihood is remote that in the next few years the city will be able to afford to fund an increase in the capital plan for the schools by simply borrowing more money. In order to end student overcrowding and keep pace with school repairs, a larger share of the city's capital resources must go to the public schools.

√ **Recommendation: Given New York City's debt load, the capital budget cannot be expanded significantly. In order to end overcrowding, and thus improve student academic outcomes, increase the share of the city's capital budget for school construction to 40 percent from the current 30 percent share.** Based on expenditures in FY 2001, this would provide, not accounting for a growth in the city's capital budget, $417 million more a year (or $2 billion more over the next five-year capital plan) for the construction and leasing of new schools.

[25] October 2000, p.19.

Chapter 6 State Building Aid's Negative Impact

While New York City gets an adequate reimbursement from the state for its building repairs, about 64 percent, it gets on average only 25 percent to 37 percent reimbursement for building new schools. The resulting irony is that the school district where overcrowding is the most severe in the state is getting proportionately *less* Building Aid than school districts of similar wealth.[26]

New York State has an enormous impact on local districts' school facilities construction programs. To begin with, before undertaking a new construction project, districts need to know what percent will ultimately be reimbursed by the state (or what percent is "aidable.") In recent years the state has funded fifty percent or more of all school construction projects. Yet despite the role the state plays, there is no central planning board or priority of projects. The Building Aid formula itself is understood by only a few facilities and budget professionals. Finally, in spite of concerted efforts to make the formula more equitable, it remains regressive in its actual implementation. Before launching into the nitty-gritty of the funding formula, however, it is important to understand some of the broader context in which the formula functions.

• **New York State Building Aid has increased in the last decade.** There is some good news: today Building Aid represents approximately ten percent of the total state education aid budget.[27] Since 1992, the amount of state Building Aid paid to New York City has more than doubled.[28] The percent of overall state Building Aid has also increased.

Table 6. State Building Aid Increases

	New York State	New York City	NYC's Percent
1992	$491,287,735	$104,689,601	0.21
1993	$530,213,029	$129,242,777	0.24
1994	$607,448,375	$145,894,429	0.24
1995	$615,045,599	$146,783,979	0.24
1996	$611,364,083	$157,571,668	0.26
1997	$692,968,026	$181,366,388	0.26
1998	$794,803,096	$219,293,811	0.28
1999	$917,360,704	$250,240,654	0.27

Unfortunately that is the end of the good news. The rest of the news on Building Aid is fairly dismal. If we work from the general framework of Building Aid down to the specifics of the funding formula, it will be apparent why Building Aid is ineffective. To begin with, although this funding is for school buildings, it has little to do with education.

• **State Building Aid is divorced from educational goals.** Capital projects that have an impact on learning, such as the creation of more classrooms to reduce class-size averages in the early grades, the creation of small schools, or the reduction of overcrowding, are not made priorities *because there are no priorities in Building Aid.* Neither are projects directly related to the statewide education standards, such as high school science laboratories. In fact, currently no district can get state aid for a science lab unless it is also used as a regular classroom.

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[26] EPP compiled a seven-year analysis of the distribution of Building Aid, *Building Aid Shortchanges the Big Cities*, March 2001, which shows that the five biggest cities in the state receive less Building Aid than school districts of comparable wealth. The other four cities, however, do not have problems with student overcrowding.

[27] *School Construction and Building Aid: An On-Again, Off-Again Priority*, Office of the New York State Comptroller, December 2001, p. 9.

[28] Figures provided to EPP by the NYC Comptrollers office.

• **There is no planning process beyond state budget estimates and expenditures.** In the first chapter we discussed the modest progress that has been made by the Board of Education and the School Construction Authority. As we noted, New York City *does* have a capital planning process. Although it would benefit from a number of suggested reforms, the city *does* prioritize building projects by need. In contrast, the state has no capital planning process in place for school facilities. Since there is no planning process, *there is no criterion for determining which projects are priorities, whether because new graduation standards mandate better facilities, or because the student population has skyrocketed, or just by age and condition of the buildings.*

In January 2001 Governor Pataki's Executive Budget proposal surprised both legislative houses by arguing for progressive reform: it stated that Building Aid should be targeted to school districts with the greatest needs for improved school facilities. While representatives from urban and small city districts might have championed this proposal to target resources to need, the proposal was accompanied by a huge cut in funding for capital projects as well as the stipulation that no new capital project claims were to be accepted from school districts with insufficient building maintenance. These provisions made a laudable reform unacceptable.

• **Building Aid provides a disincentive to low-wealth or high-needs school districts to fund preventive maintenance.** Throughout the last decade, every review of New York City Board of Education's spending on maintenance has found that this school district spends less on a per-square-foot basis than comparable large cities in the rest of the nation and, even more shocking, less than the city does for its own municipal buildings. From a cost savings perspective, it is more advantageous for the city to reach a state Building Aid threshold of $30,000 for a capital repair than it is to prevent repairs. EPP has heard anecdotal evidence that this same advantage is grasped by officials in low-wealth school districts. It may be true that this built-in disincentive to spend money for preventive maintenance is helping to create dilapidated conditions for schools.

• **State Building Aid is spend-to-get**. Building Aid is a *reimbursement* of local school districts' payments for principal and interest on their borrowing for each capital project. Some low-wealth school districts either do not have the community support or the resources to issue bonds. As discussed in the previous chapter, the five large city districts, including New York City, have constitutional and legislative debt ceilings. Even if all debt ceilings were removed (which would be highly unwise, from a fiscal point of view), funding for schools in large municipal districts must also compete with funding for a huge array of other capital projects, such as bridge and road repair, public hospitals, police precincts, and libraries, to name a few. The point is that, structured as a "spend-to-get" formula, Building Aid provides funding only to those districts that can spend. It is akin to giving out discount coupons for gasoline and ignoring the reality that some people cannot afford to buy cars.

The four issues we have just described reflect serious defects in the overall legislative and regulatory framework within which state Building Aid funding operates. As stated above, building projects are not prioritized by need, educational or otherwise. But even if *projects* were prioritized, it is still possible that the calculation for how much aid *each project* would receive would be disadvantageous to New York City.

Why is the Building Aid formula unfair to New York City? There are three reasons, and each reason is directly linked to each of the three components of the formula itself. In broadest terms, the first component deals with capacity per pupil, the second term deals with regional cost differences, and the third deals with ability to pay. For now we will wait until the next chapter to discuss the issue of capacity. We have dedicated a whole chapter to it partly because until now only a select few facility and building professionals have understood it at all. The Regional Cost Index was incorporated into the formula in an attempt to make it more equitable overall. *However no*

examination of the real differences in the costs of building in the states' divergent regions was ever conducted. Finally the last term, the Aid Ratio, is based on each districts' ability to pay as reflected by wealth.[29] *However, this term too is compromised because districts have the option of selecting the Aid Ratio that was most advantageous to them going back twenty years.*

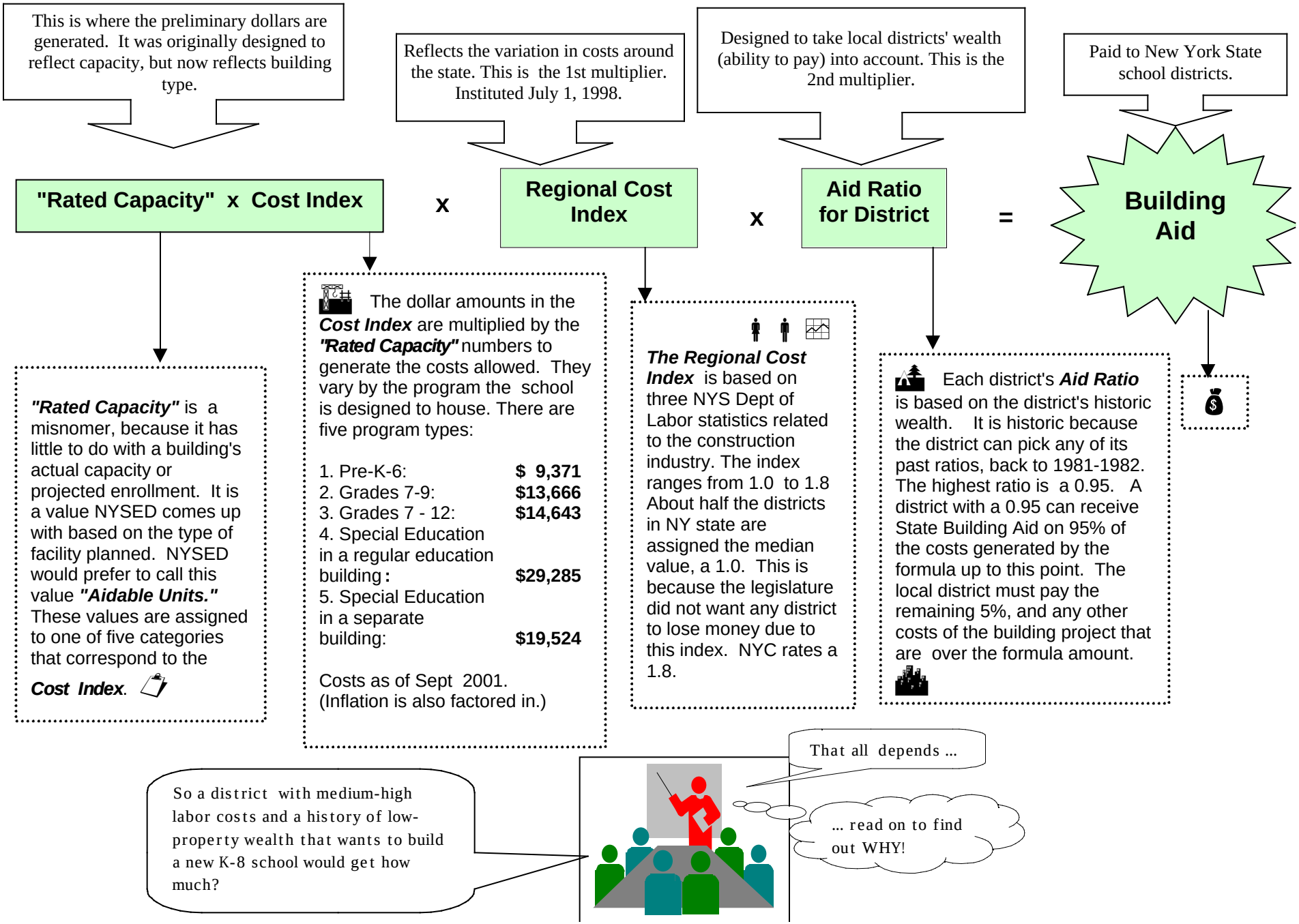
• State Building Aid does not realistically reflect the cost of building in New York City. The entire Building Aid formula is used to set cost ceilings above which there is no reimbursement from the state to the local district. Without these ceilings, the availability of Building Aid could encourage wasteful spending or even fraud. However these ceilings may be set too low for New York City. Until 1998 there was no reflection of the higher cost of building in the downstate region versus the rest of the state. After 1998 Building Aid was made more equitable by the inclusion of the Regional Cost Index, based on labor figures from the construction industry. While helpful to the downstate region, this index does not accurately reflect the still higher costs of building in New York City, where site configuration and preparation, for example, produce additional costs beyond just labor. Nor were New York City's strict and expensive building codes for schools assessed. In short, the State Education Department never analyzed the average costs of construction in the city or the costs of complying with local building code requirements.

• The Aid Ratio no longer reflects ability to pay. Just as in many of the other formulas in state school aid, Building Aid is wealth adjusted. Supposedly, low-wealth school districts get more Building Aid, and high-wealth districts get less. But in Building Aid, school districts can choose their most advantageous wealth measurement. This topic was treated in a December 2001 report from the New York State Office of the Comptroller entitled *School Construction and Building Aid: An On-Again, Off-Again Priority*. EPP agrees with its finding that *the district Aid Ratios are no longer equitable*. Instead of accurately representing districts' ability to pay as measured by wealth, *the Aid Ratio actually favors districts where wealth has increased* relative to other districts in the state. This is because districts can *choose* the most advantageous Aid Ratio (assessed annually) dating back to 1981-82. This is something like wealthy college applicants receiving a financial aid package based on decade-old family income data, because ten years they were much less well-off.

There are many reforms that need to made in the way State Building Aid is dispensed. *Most importantly, it must be tied to educational goals, and it must be made equitable*. In the next chapter we will look at the way the formula works in detail, because the formula determines with how much funding an *individual* project will receive. The next chapter will also list EPP's recommendations for reforming state Building Aid.

[29] For a discussion of how the Aid Ratio is arrived at, see NYSED, Fiscal Analysis and Research Unit, *Research Note: Wealth and Revenue Changes 1994-95 to 1998-99*, Dec. 2001.

Figure 1. New York State's Building Aid Formula



Chapter 7 A Different Standard for "Capacity" for NYC Schools

EPP believes that the purpose of building school facilities should be to further our state's educational goals. State funding for schools, although named "Building Aid," must not be thought of as a statewide construction program. Districts have different educational needs. Not all districts should be encouraged to build new schools, because not all districts need new schools.

Beyond determining which projects should have priority, the state must also determine *how much aid each project* should receive. This is why EPP has included this chapter which describes how the formula works, because it is the formula that determines how aid is allocated on a per-project basis. Until now, only a few people have really understood how this formula works, and even now, EPP would not claim to be an expert. Rather, EPP has tried to take a complicated subject and make it relatively understandable to a much wider audience.

The formula is composed of three *main* components dealing with (1) capacity, (2) regional cost differentials and (3) ability to pay (the Aid Ratio). The first one is the primary focus of this chapter. Regional Cost and the Aid Ratio were discussed in the last chapter but will be mentioned again here. The reader should know that there are other *minor* elements of Building Aid which are not dealt with in this report. For a complete list of building-related aids see the NYSED document *State Formula Aids and Entitlements for Schools in New York State*.[30]

• **New York City and New York State have very different definitions of the term "capacity."** New York City's building codes for school construction take precedence over the state's standards for school building. It may originally have been for this reason that the NYC Board of Education did not submit its new school plans to the state, and developed its own way of submitting claims for state aid. Currently, however, NYC Board of Education officials believe that the NYS Education Department does not have the staff to be able to handle the volume of construction and the associated paperwork undertaken by its largest district. Therefore, the Board of Education and the School Construction Authority use locally-generated numbers based on potential enrollment, numbers tied to population and usage rates of existing buildings. The Division of School Facilities developed these numbers to inform the Board of Education's five-year capital plan.

In State Education Department parlance, Building Aid for New York City is determined by Operating Capacity, whereas for the rest of the state it is determined by State-Rated Capacity. What is the difference between the two "capacities"? In contrast with Operating Capacity, State-Rated Capacity (or "Rated Capacity" for short) is defined the following way: It is "the total number of students assigned by the State Education Department of Facilities Planning to a building for the purpose of determining the maximum cost allowance for a capital construction project."[31] In other words, it has zero to do with projected enrollment. Instead, it is based on the type of facility the district would like to build. The Department of Education is well-aware that with the exception of New York City, new school buildings are no longer aided based on actual pupils. For this reason, they have proposed renaming the term Rated Capacity. They would like to call it "Aidable Units."

The difference in the two capacities is no small matter, because it is the capacity measure multiplied by the cost index that generates the preliminary cost ceiling for a project. It so happens that using Operating Capacity instead of Rated Capacity has short-changed New York City. How

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[30] NYSED, State Aid Unit, *State Formula Aids and Entitlements for Schools in New York State.* (Albany: SUNY/SED, August 2000), pp. 11-22. http://stateaid.nysed.gov/handbk00.pdf

[31] State Education Department memo from Carl Thurnow, Coordinator for the Office of Facilities Planning, to the District Superintendents, *Subject: State Building Aid for Public School Districts and BOCES,* April 1999, p.7. http://www.emsc.nysed.gov/facplantest/publicat/bldgaid.pdf,

do we know this is so? It is surprisingly easy to tell. For all of the new school buildings built in New York State since 1996 outside New York City, the Rated Capacity value is *176 percent* of the projected enrollment. By contrast, the city has submitted "rated capacity" that is just *105 percent* above projected enrollment. (See Tables 1 and 2 in Appendix Four.) In other words, if NYC Board of Education buildings were aided based on State-Rated Capacity rather than Operating Capacity, the city would receive 71 percent more aid from the state than it currently does. This is an *average* figure. A number of districts received aid based on values *double* their projected enrollment. If we apply the formula to two fictional districts, one in New York City and one outside the city but still in New York State, we will get the full picture of how the formula really operates.

See Figure 1 at the start of this chapter. In Figure 1, the Building Aid formula appears in the shaded blocks and reads from left to right as:
("Rated Capacity" x Cost Index) x (Regional Cost Index) x (Aid Ratio) = Building Aid[32]

"Rated Capacity" or "Aidable Units." The first figure in the formula is the so-called "Rated Capacity" which, when multiplied by the Cost Index, sets the initial cost ceiling for state aid on a new building project. The "Rated Capacity" is determined by NYS Education Department officials, and it is based on the type of facility the district proposes to build. Despite its name, state education officials have told EPP that *"rated capacity" is not synonymous with potential enrollment.* The highest point value that state education officials can assign to a planned classroom space, a 27, is simply intended as an incentive for districts to build standard size classrooms. [33] Nearly all districts build the standard size, even though they intend to have no more than 22 or 26 students per classroom. The whole issue of the name "Rated Capacity" is under discussion at the State Education Department. Most people familiar with the process believe that a more accurate term would be "Aidable Units." For the sake of this discussion, we put the term rated capacity in quotes, because this term constitutes an important part of the problem with the formula.

The Cost Index "Rated Capacity" is multiplied by the figures in the cost index which correspond to the type of space that is planned. To give an example, a new elementary school with a "rated capacity" of 200 would be initially awarded a cost allowance of $ 1,874,200 (200 x $9,371.) The New York State Education Department determines these figures, which are updated monthly. In reality, the allowable costs in the index are divided into two sub-categories: construction costs and incidental costs (such as legal fees or furniture), but for the purpose of this discussion they have been lumped together as one. (For pre-kindergarten through grade 6, construction costs allowed are $7,809 per "rated capacity" number, and incidental costs allowed are $1,562 per "rated capacity" number. For the purpose of this report the numbers have been summed: $7,809 + $1,562 = $9,371.) The following is an example of how the first term in the formula might be generated for a district that plans to build a new school for grades kindergarten through grade 8.

"Rated Capacity" x Cost Index for NYS fictional district

	Enrollment	Rated Capacity	Cost Index	Preliminary Dollars
K - 6	700	1,200	$9,371	$11,245,200
7 and 8	300	420	$13,666	$5,739,720
Special Education	50	200	$29,285	$5,857,000
TOTALS	1,050	1,820	$52,322	**$22,841,920**

[32] See also State Education Department memo from Carl Thurnow, Coordinator for the Office of Facilities Planning, to the District Superintendents, *Subject: State Building Aid for Public School Districts and BOCES*, April 1999. http://www.emsc.nysed.gov/facplantest/publicat/bldgaid.pdf
[33] As set by the New York State Education Department, 900 square feet for grades Pre-Kindergarten and Kindergarten, 770 square feet for grades 1 – 12.

In this example the preliminary cost ceiling for this school is roughly $22.8 million.

The Regional Cost Index The ultimate amount the fictional district above will receive will not be $22.8 M. That is because there are two additional multipliers in the aid formula. The first, the Regional Cost Index, was added beginning in FY 1998-99 by the legislature in recognition that in New York costs vary greatly by region.[34] For exmple, it will cost much less to build the same school in Erie or Cayoga counties than it will in Nassau or Kings counties. The Regional Cost factor is calculated by dividing the county composite labor rate for three construction-related industries by the median statewide labor rate.[35] When a district rates a Regional Cost below a 1.0, which is the median, it is "rounded up" to a 1.0.[36] For our fictional NYS district we have a assumed a Regional Cost Index (RCI) of 1.2.[37]

"Rated Capacity" x Regional Cost Index (RCI)

Preliminary Dollars	Regional Cost Index	total
$ 22,841,920	1.2	**$ 27,410,304**

The Aid Ratio . The second and final multiplier in the formula is the Aid Ratio. As discussed in the last chapter, school districts can choose their most advantageous wealth measurement. For our fictional district we assume a 2001-02 Building Aid Ratio of 0.56. However, in 1987 the Building Aid Ratio for this district was at an all-time high: it was a 0.70. New York State law allows districts to select any Building Ratio back to 1981-82, minus 0.10. So this district can select a 0.60, which is still higher than their current aid ratio. (If it was not higher than the current year ratio, the district can chose its current year aid ratio.) Then the law allows the district to add the 0.10 back in. So although the cumulative wealth index is 0.56, this district's aid ratio is 0.7. No aid ratio is below 0.10 or above 0.95. In our example, this hypothetical district can plan on receiving $19,187,213 in state Building Aid. [38]

Preliminary Dollars x RCI (from above)	District Aid Ratio	BUILDING AID
$27,410,304	0.7	**$19,187,213**

If this district is able to build its K-8 school for $22,000,000 it can count on the state covering roughly 87% of their costs. Even if the district decided to build a fancier school, one which would cost perhaps $30 million, the state would reimburse roughly 64% of the cost. Since most districts have to go the voters to get a bond approved, the voters also have a say in what type of school is built.

This is the way the formula generally works. However, New York City is a special case. Here are the Rated Capacity numbers for our new K-8 school in New York City. They look suspiciously like the projected enrollment numbers. (The school in the fictional district above also has a planned enrollment of 1,050.)

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[34] State Education Law, section 3602(6)(a)(1)&(2). Only in effect for contracts signed after July 1, 1998.
[35] State Education Department memo from Carl Thurnow, Coordinator for the Office of Facilities Planning, to the District Superintendents, *Subject: State Building Aid for Public School Districts and BOCES,* April 1999. http://www.emsc.nysed.gov/facplantest/publicat/bldgaid.pdf.
[36] This is not quite as unfair as it may seem at first. The average factor for the districts falling below the median is a 0.96. Regional Costs for 2001-02 for all counties can be found on the NYSED web site at http://www.emsc.nysed.gov/facplan/articles/rci01-02.html
[37] Real regions with this RCI include Albany, Schenectady, Schorie and Montgomery Counties.
[38] State Building Aid is paid on interest as well as principal, so the amounts above are not real. Rather they are the amounts that would be paid if the district did not have to borrow money but could pay for its new school outright.

New York City

Step 1. "Rated Capacity" x Cost Index

	Enrollment	Rated Capacity	Cost Index	Preliminary Dollars
K - 6	700	750	$9,371	$7,028,250
7 and 8	300	350	$13,666	$4,783,100
Special Education	50?	n/a	n/a	n/a
TOTALS	1,050	1,100	$23,037	**$11,811,350**

Steps 2-3. Preliminary Dollars x Regional Cost Index x Aid Ratio

Preliminary Dollars	Regional Cost Index	District Aid Ratio	BUILDING AID
$ 11,811,350	1.8	0.56	**$ 11,905,840**

The result is that New York City could expect roughly $ 11.9 M from the state to offset the cost of the new K-8 school. In the city, however, it is difficult to build a school for less than $40 million. The reasons are many and may deserve a close examination. For this example, we can assume that the site available for this school needs extensive cleanup before construction can begin. Further, the contractors may suffer significant impediments to completing the project, including, but not limited, to hours lost due to traffic delays, not having a place to deliver raw building materials, having to build within a strict "footprint," and having to comply with stringent local building codes. *The end result is that, if the construction goes very well and there are no cost overruns, New York City will be reimbursed for, at most, 30 percent of its expense. If New York City were any other district, the Rated Capacity would be nearly 176 percent of its projected enrollment. The figure of 176 percent is based on the ratio of Rated Capacity to enrollment for all other public school building projects in the state in the last five years. The figures below represent what New York City would be aided on under circumstances similar to the rest of the state.*

A year ago, budget staff of the New York City Board of Education and the School Construction Authority met with State Education Department staff to review how aid is determined. At that time, their conclusion was that New York City came out slightly disadvantaged compared to other school districts in the rest of the state by the variations in computing Rated Capacity for elementary schools, but gained an advantage over other districts when it came to high schools. Our analysis suggests that this issue should be revisited.

New York City (if it was in any other part of the state)

Step 1. "Rated Capacity" x Cost Index

	Enrollment	*Rated Capacity*	*Cost Index*	*Preliminary Dollars*
K - 6	*700*	*1000*	*$9,371*	*$ 9,371, 000*
7 and 8	*300*	*550*	*$13,666*	*$ 7,516,300*
Special Education	*??*	*200*	*$29,285*	*$ 4,607,400*
TOTALS	*1,050*	*1,850*	*$23,037*	***$21,494,700***

Steps 2-3. Preliminary Dollars x Regional Cost Index x Aid Ratio

Preliminary Dollars	*Regional Cost Index*	*District Aid Ratio*	*BUILDING AID*
$21,494,700	*1.8*	*0.56*	***$21,666,746***

In this scenario, NYC would be aided at 56% of its $40 M building cost; much closer to the average of 60%, the average reimbursement rate for the rest of the state.

Another way to look at the discrepancy is the variation in the way school districts submit enrollment information for children in special education. Special education is important in facilities planning because special education classrooms in a general education facility are aided at a much higher rate than all other planned uses. (See Figure 1, the Cost Index.) How can a school district know ahead of time how many students will need special education services? For this reason, until just one year ago, New York City did not submit a projection to the New York State Education Department for the number of special education students that would be educated in the new schools. The Board of Education was functioning under a strict interpretation of capacity. In contrast, nearly all of the other new school buildings undertaken in the state in the last five years were assigned Rated Capacity numbers (Aidable Units) in the special education category that were between 7 percent and 33 percent of their projected enrollment. Close to half of the districts were assigned a percent of special education "rated capacity" over ten percent of their projected enrollment.

There needs to be an extensive review of state Building Aid formulas and practices. The Governor has taken a particularly extreme negotiating posture on Building Aid in order to force the legislature to confront the rapid escalation of costs in this area. Building Aid has climbed above the $1 billion mark, and there will no end in sight unless spending by school districts is contained. In the fall, he succeeded in getting the legislature to require that Building Aid payments based on the usable life of the project. Irrespective of whether a school district has borrowed capital funding on a five, ten, or twenty year basis for the construction of a new school, the state will reimburse the district as though it had borrowed funding on a 30-year basis. Similarly, the costs of additions to schools will be reimbursed over 20 years and capital repair projects over 15 years. This decision did not impact the New York City school district, which issues 30-year general obligation bonds for most of its capital projects.

At the beginning of the 2002 legislative session, the Governor proposed restricting school districts to their current Building Aid Ratio for voter-approved projects after July 1. This would put an end to letting school districts choose their most advantageous wealth measurement. This proposal has been met with a storm of criticism by legislators of both parties. There is also a question of whether the State Education Department has enough staff to cope with the volume of Building Aid claims. This volume of work has increased, especially in light of the technical problems associated with implementing the October 2001 changes, including difficulties in setting bond interest rates for each project and for different components of each project. *All these battles, however, are around containing the escalating costs of Building Aid. EPP seeks more fundamental reforms.*

Yet, the state has taken some modest steps toward capital planning for schools. In 1998 the legislature passed the Rebuilding Schools to Uphold Education (RESCUE) act which mandated the creation of a database of school building conditions throughout New York.[39] Funding was made available to alleviate some of the cost to local districts for inspections. Unfortunately the legislation did not provide funding for the State Education Department to maintain this extensive database. However, collecting information without having a clear purpose for it, that is, without establishing a planning process, is akin to owning a cart but no horse. The other problem with RESCUE is that funding is distributed based on student enrollment, that is, on a per-capita basis. Legislators, especially those from New York City, believe that this is a "fair" distribution of funds. However, this type of per-capita allocation does not prioritize needs. A district with no overcrowding and buildings in a good state of repair with 10,000 students will get the same amount of money as a district with severe overcrowding and dilapidated schools.

In an ideal world, the state legislature should draft legislation that EPP recommends in the last section of this report and not wait for a court decision in the CFE decision. It could create three

[39] *School Construction and Building Aid: An On-Again, Off-Again Priority*, pp. 9-10.

types of Building Aid since different rates of state reimbursement now exist already. It could also reject all reimbursements for the construction of new schools when districts have no overcrowding. Rather than making changes in Building Aid formulas and computations, there should be an entire rethinking of state school facilities funding. The reforms we outline below, however, are more likely to happen in the short run.

√ **Recommendation: Eliminate the incentive for under-funding preventive maintenance.** State Education Department facilities staff clearly understand that Building Aid provides a perverse incentive to school districts to let repairs go untended until they reach the $30,000 threshold for capital repairs. So far, they have been unsuccessful in getting legislation passed to force districts to be more responsible. In 1998, they wanted to require preventive maintenance for newly completed capital projects. In 2001, they proposed a minimum spending level by school districts in order to have their Building Aid claims approved. Both of these proposals could potentially invite creative bookkeeping by school districts and a never-ending enforcement headache for the state. The Assembly's stop-gap solution has been to get a portion of large city school districts' maintenance funded entirely by the state based, not on need, but merely per-capita funding according to school district enrollment. But each year, the Assembly must fight for the continuation of this Minor Maintenance funding. To add insult to injury, in February 2002, the NYC Board of Education allowed this money to be used to close the city's budget gap. *The most sensible solution, but potentially costly, is to fund preventive maintenance at a higher reimbursement level than Building Aid.* Any other solution does nothing to eliminate the incentive to put off minor repairs.

√ **Recommendation: Raise the cost ceiling for school construction in New York City.** After July 1999, new projects were reimbursed based on the regional cost of materials and labor. For New York City claims, cost ceilings were raised by a factor of 1.8. But the methodology used by the State Education Department did not include a survey of the actual costs of new construction in New York City in comparison to other parts of the state, so the cost of all new school buildings in the city still exceeds the ceilings set by the State Education Department. The methodology for computing the regional cost factor must be changed so cost ceilings for New York City do not remain artificially low. They must also take into consideration building code requirements.

√ **Recommendation: Revise the capacity formula for New York City schools so as to make state Building Aid reimbursement levels for new school construction in the city comparable to those in the rest of the state and to eliminate incentives for creating large class sizes.** The State Education Department determines capacity differently for the city than it does for the rest of the state, which has resulted in making it disadvantageous for New York City to build new schools. Building Aid formulas need to be restructured so that New York City is given an incentive to lower classroom capacities so that they are in line with schools in the rest of the state. Though the State Education Department and the New York City Board of Education have reviewed this issue of using a different "rated capacity" formula just for New York City and found that this did not create a significant differential, EPP's calculations indicate a significant impact that merits a review.

Chapter 8 Overcrowding Needs to be Better Understood by Decision Makers

Many reports about school overcrowding focus on the number of students above the capacity of a school building. Although these numbers are important in determining how many seats need to be created to relieve overcrowding, it is a misleading statement of the problem. For example, suppose 1250 students are crammed into a school with a capacity of only 1000 students. The overload for that school is 250 students. But *all* 1250 students in that school must live with large and overcrowded classes, fewer course and program offerings, classes in gyms, storage rooms, basements, and even former bathrooms. The noise and stress levels in overcrowded schools also affects students as well as staff members. Because every student in an overcrowded school is affected by overcrowding, the number of students in overcrowded buildings is an important measure of the extent of the overcrowding problem.

This report documents the lack of significant progress in reducing the numbers of students who remain in overcrowded school buildings. The next section will discuss some of the reasons why the expenditure of $10.5 billion on school facilities has resulted in a net decrease of only 4,723 students in overcrowded elementary schools, leaving 243,271 students still affected by this problem. (See Appendix Table 2.) The persistence of overcrowding, however, cannot solely be blamed on lack of funding and a clash of objectives for the capital plan for public schools. This chapter will explain other factors that have contributed to the persistence of this problem, including confusion over the standards applied to determine "overcrowding."

• The uneven instructional quality of public schools in New York City creates student overcrowding. School improvement is the most potent strategy for ending overcrowding. We cite just a few examples of how instructional quality impacts on overcrowding:

Delayed high school graduation rates In EPP's 1990 report, *Hanging In*, we found that one high school student out of every four was taking more than four years to graduate. Now close to one out of every three students is taking five, six, and seven years to graduate.[40] If 90 percent of students could graduate within four years, *there would be no high school overcrowding.* The solution is not to remove them from high school buildings, a policy partially put into place by Mayor Giuliani in 1998, but to improve instruction and the curricula from fifth grade to eighth, when the academic achievement gap between New York City students and their peers in the rest of the state widens.

Over-referrals to special education and remediation programs A scientifically rigorous study conducted of Tennessee's STAR class size reduction program found that the proportion of children who were identified as needing special education was cut in half when average class sizes in the early grades were reduced to between 15 and 17 students.[41] By increasing student achievement by six months to a year, especially for urban, low-income male children, fewer children need to be referred to Resource Rooms (part-time special education classes for children with moderate learning disabilities) or to small group remediation sessions. Both of these additional instructional programs require additional classroom spaces in schools. Currently, there are 7,673 Resource Rooms in the 32 community school districts.[42]

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[40] NYC Board of Education, Division of Assessment & Accountability, *The Class of 1999 Four-Year Longitudinal Report.*
[41] *The state of Tennessee's Student/Teacher Achievement Ratio Report (STAR) Project: Technical report 1985-1990* Tennessee State Education Department, 1994, Appendix 6, "Cost Effectiveness."
[42] NYC Board of Education, Office of Budget Operations and Review, BOR #1 FY 2002.

Grade retention In 2000, from the third to the eighth grade, 21,105 students were held over to repeat a grade.[43] This was the second year of the Board of Education's policy to require some low-achieving students to repeat a grade if they tested in Level 1, the bottom quarter of test takers. As more children stay in elementary and middle schools one year longer, schools become more overcrowded. So far, the results of summer school and holding children over in their grade has produced only a modest improvement in the numbers of children who are testing in the bottom quarter, which has exceeded 300,000 each year. If the Board of Education follows the example of other school systems that have experimented with this policy, notably Chicago, there will be fewer grade retentions in the near future. Nevertheless, this policy will have the same effect as delayed high school graduation rates in increasing the numbers of students at each school level.

"Choice" leaves low-achieving schools and districts underutilized With a more even distribution of "good schools," overcrowding could be reduced, except in the borough of Queens. In 1998, EPP found that in 27 out of 32 community school districts in New York City, the three schools where children had the highest average scores on the May 1997 CTB-R English Language Arts test had higher building utilization rates than the three schools where children had the lowest average scores.[44] This was consistent with EPP's previous two reports about school improvement, *Getting Off the List* and *Beating the Odds*. In these studies, principals and teachers told us of declining enrollment when their schools began to get a "bad reputation" and a surge of enrollment when the school turned around. Parents will do anything to get their children out of bad schools and bad districts, including getting relatives and friends to state that their children are residing with them. In 2001, the Chairperson of the Community School Board of District 10 in the Bronx wrote a letter to the Chancellor to explain that more than 2000 "out of district" students were one of the contributing factors to his district's overcrowding problem. Not stated, of course, was that the parents of these children were trying to escape low-achieving schools in other Bronx school districts. The irony is that once "good schools" become too overcrowded, there is a potential for a decline in student academic performance.

• How many new immigrants will come to New York City and where they will settle are difficult to predict. Until the mid 1990's, there was an erroneous assumption that the city was experiencing a "baby boomlet" that was causing overcrowding in the schools. This was discussed by the Commission on Planning for Enrollment Growth, chaired by P. Michael Timpane, former President of Teachers College, Columbia University, when it issued a report, *Bursting at the Seams* in January 1995. The Commission concluded that student enrollment growth came exclusively from immigration. This meant that efforts to predict future growth would be difficult. Rates of immigration are closely tied to federal laws and quotas, which are not under the control of the city or the state. Another difficulty in prediction is that wars and economic dislocation in other countries can lead to an unexpected wave of new immigrants. For example, the continuing decline in the economy of the Dominican Republic has resulted in severe overcrowding in schools in the northern tip of Manhattan.

Compounding this problem, when immigration started to rise in the middle of the1980's, there was a new twist. Instead of settling in traditional immigrant neighborhoods like the Lower East Side and the South Bronx which have school buildings every five blocks, the newest wave of immigrants clustered in neighborhoods in Queens, Brooklyn, the Bronx, and Upper Manhattan where there were not enough schools. With the exception of Queens, the other boroughs have only pockets of severe overcrowding, all of them high-immigrant communities.

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[43] Metis Associates, Inc., *New York City Board of Education Evaluation Report Summer School 2000*, January 26, 2001, page V. 2.

[44] Average student scores by school on the May 1997 CTB-R English Language Arts test were used for this comparison.

• **School district practices have contributed to the persistence of school overcrowding.** From the very inception of the New York City school district in the 19th century, there has been a very powerful layer of middle managers in charge of districts within each borough. Though the school building program has always been controlled by the central office of the Chancellor and the Board of Education, district superintendents' policies and practices have a direct impact on the extent of overcrowding in schools. To some extent, all district superintendents look at overcrowding on a regular basis and establish policies to reduce the problem, such as sending fifth graders to middle schools. Superintendents could do more to ease overcrowding. Here are three examples:

Triage This is a district policy, often covert, in overcrowded districts where one or more schools are allowed to remain severely overcrowded so that the majority of schools can remain modestly overcrowded. From the data available in the Board of Education's annual *Enrollment - Capacity - Utilization* report, EPP has concluded that over the last twelve years there has been a reduction in the number of schools at 125 percent at or above capacity. The creation of new seats may not account for all of this improvement. Under Chancellor Crew, the United Federation of Teachers began a strategy of filing class-size grievances. There is an "exception" clause in the UFT contract that allows management a waiver if class size limits are exceeded due to school overcrowding. But the union has made the case that, if year after year class sizes are above the contractual limit, no "exception" exists because it has become a standard practice of the district to have classes above the contractual limit.

An arbitrator within each community school district hearing these grievances must make a ruling on the issue, which applies only to the district. For this reason, the UFT has continued to urge all teachers in overcrowded districts to file grievances, so then district-by-district there will ultimately be an arbitrator's ruling that community school districts should no longer get waivers for class sizes above the contract limit based on an "exception." In Community School District 6, an arbitrator made this ruling. Though the schools in this district remain overcrowded, a teacher and a union official report that the situation has improved. A joint committee of district staff and the UFT have developed a protocol to evaluate whether there are unused classroom spaces and whether student registers have been fairly distributed among schools, including joint committee "walk-throughs" of buildings. The continuing practice of triage in other districts, however, may be a contributing factor in why over 36,000 students remain in severely overcrowded elementary schools.

Failure to reconfigure schools, zones or district lines Almost all reports on the school facilities crisis present data on the extent of overcrowding for the whole city. A district-by-district breakdown shows that in 1989, there were 16,777 more seats than there were elementary and middle school students, despite the fact that there were 299,061 students in overcrowded schools. The lack of fit between where students are located and where additional classroom space is located has grown. There is now an excess capacity of 26,623 seats in main school buildings. Because of the changing locations of new immigrant neighborhoods, many districts have a surplus of seats. In some cases, overcrowded districts are adjacent to districts with excess capacity. As will be discussed later, some school districts with overcrowded elementary schools have middle schools that are functioning at far less than their "rated capacity". Below is a breakout of every district's excess capacity. There are only eight districts with no excess capacity in their main school buildings.

Table 7. Change in the number of excess seats (- under load) by Community School District, main school buildings only, 1989 & 2001

Community School District	1989	2001	Change	Community School District	1989	2001	Change
1	-2,473	-2,919	-446	17	2,816	-481	-3,297
2	-3,367	-2,557	810	18	1,673	-451	-2,124
3	-2,477	-3,358	-881	19	-77	-2,207	-2,130
4	-2,615	-2,224	391	20	-2,523	881	3,404
5	-1,270	-2,056	-786	21	-2,304	-1,485	819
6	2,605	1,995	-610	22	435	-127	-562
7	-3,421	-1,927	1,494	23	-2,064	-925	1,139
8	-2,031	-1,390	641	24	2,907	2,899	-8
9	1,580	-640	-2,220	25	-60	-288	-228
10	5,540	1,523	-4,017	26	-1,145	-132	1,013
11	374	1,856	1,482	27	1,352	2,181	829
12	-1,947	-2,211	-264	28	890	-137	-1,027
13	-2,218	-3,928	-1,710	29	923	829	-94
14	-2,731	-3,113	-382	30	572	710	138
15	289	-1,931	-2,220	31	-4,254	-1,230	3,024
16	-2,230	-2,774	-544	32	474	-1,006	-1,480
Totals	**-16,777**	**-26,623**	**-9,846**				

Source: EPP calculations from data in the New York City Board of Education School Facilities, *Enrollment - Capacity - Utilization*, Vols. 1988-1989 and 2000-2001

Redrawing community school district boundaries, establishing new zones for schools, and reconfiguring schools could result in a reduction of student overcrowding. Of course, it should be done on a case-by-case basis. The data in Table 5 suggest that community school district superintendents could do more to alleviate overcrowding. The reluctance to make these changes may come from the fact that intense community battles emerge when attempts are made to change the boundary zones of schools. Underlying some of these battles are racial or class antagonisms which cannot be easily resolved. Without a clear directive from the central office of the Board of Education and continual monitoring of efforts to abate overcrowding, it is doubtful that more than a few superintendents will undertake these efforts on their own. Given the billions of dollars that must be spent to create more schools, it is imperative that the Board of Education find ways in which to better utilize current school facilities. It should be noted that the Board of Education has succeeded in freeing up more classroom space over the last four years by finding leased space for the offices of community school districts and high school district superintendents, many of which were housed in school buildings. Unfortunately, this leased space cannot be claimed for state Building Aid.

• **The standards for determining student overcrowding are confusing and, in some areas, questionable.** In the process of completing this report, we have found a misalignment between standards and practices. Either standards for student overcrowding need to be revised so that it is not over reported in statistics, or practices need to be revised so that they conform to the standards set for determining building capacity.

There are two different ways to define overcrowding. Class-size standards focus on overcrowded classes. A class is overcrowded if there are more students in the class than the teacher is expected to handle under the UFT contract. Thus, if a teacher is expected to handle 32 students in a fifth-grade class, but she has 36, the class is overcrowded by four students regardless of how much space is available in the classroom. In contrast, facilities are overcrowded if they have more students than can usually be expected to fit comfortably into space of a given size. The New York City building codes require 20 square feet per student for first through ninth grade and 35 square feet per kindergarten and pre-kindergarten student. A classroom that has the square footage to accommodate only 20 students will be considered overcrowded even if class-size standards and the union contract allow more students to be in a class.

The Board of Education's formula for determining the capacity of facilities attempts to take both crowded classrooms and crowded classes into account. Under this formula, the Board of Education designates that each kindergarten student requires at least 35 square feet of space in a class of no more than 25 students. Thus, the capacity of a 700-square-foot classroom is 20 students, and the capacity of a 1,050-square foot classroom is 25 students, but a classroom larger than 1,050 square feet, only has a capacity of 25 students no matter how much larger it is. The Board defines the needs for first through third graders as 20 feet per student, to a maximum of 25 students per class. Thus a classroom of 500 square feet or more has a capacity of 25 students. For fourth through ninth grade, students are said to require 20 square feet up and no more than 31 students per room (or 29 for Title I schools). Thus a classroom of 620 square feet or more has a capacity of 31 students.[45] The capacity formula also includes adjustments for room use and type of student and other factors.[46] These differences between facilities standards and class-size standards cause much confusion about what is an overcrowded school. Here are two examples:

> Most leased buildings and transportable classroom units (TCU's) are designated as "overcrowded." A principal who creates smaller class sizes for these auxiliary spaces, below those required by the union contract, but above the New York City building code standards, will be creating "overcrowding." None of the classes appear to be overcrowded and the teacher's contract limit has not been exceeded, so school staff usually would not consider the leased space or TCU to be overcrowded. But because its square footage is inadequate, it is an overcrowded facility. *Table 8 shows that two-thirds of students in auxiliary buildings or TCU's, added to alleviate overcrowding, are defined as being in overcrowded conditions.* For this reason, this report has focused primarily on overcrowding in main school buildings.

Table 8. Overcrowding in elementary school buildings, 1989 and 2001

	1989	2001	Change	%Change
TOTAL ENROLLMENT (all buildings)	483,745	552,389	68,644	14.19%
Students in main buildings	465,258	514,887	49,629	10.67%
Students in all auxiliary buildings (A+B)	18,487	37,502	19,015	102.86%
A. Students in TCUs	0	15817	15817	undefined
B. Students in other auxiliary buildings	18,487	21,685	3,198	17.30%
Students in overcrowded main buildings	247,994	243,271	-4,723	-1.90%
Students in overcrowded auxiliary buildings	8,843	24,135	15,292	172.93%
Students in ALL overcrowded buildings	256,837	267,406	10,569	4.12%

Source: EPP calculations from data in NYC Board of Education School Facilities, *Enrollment - Capacity - Utilization*, Vols. 1988-1989 and 2000-2001

[45] Figures come from *No Room to Learn*, the NYC Public Advocates Office, September 1999, p. 16.
[46] For detailed description of the capacity formula see the NYC Board of Education School Facilities *Enrollment—Capacity—Utilization* report, 2000 – 2001.

> Class sizes that are allowable under the UFT contract are designated as overcrowded by the Division of School Facilities. According to the current New York City Board of Education's *Capacity – Enrollment – Utilization* report, full-sized classrooms are expected to hold no more than 25 kindergarten through third grade students and no more than 31 higher-grade students, unless the school is a Title 1 school, in which case the number reduced to 29. The UFT contract, on the other hand, sets a limit of 32 students in elementary subject classes and 33 students in junior high school subject classes. *All classes at the UFT maximum are "overcrowded."*

Capacity figures are collected by the Board of Education by reviewing annual utilization surveys submitted by schools and following up with phone calls to the local schools. The BOE claims that it thoroughly checks and double checks its data, but some miscommunication between schools and the BOE creates occasional errors. A staff member of former Public Advocate Mark Green, Helaine Doran, visited 46 schools and found that most school staff did not understand the importance of these reports and how they influenced the utilization report. Enrollment figures are reported by local schools. Budget decision makers need to have a better assurance that statistics about school utilization are objective.

This report has avoided presenting data on overcrowding in secondary schools. For over a decade, EPP has questioned high school utilization statistics, which were compiled by the Division for High Schools rather than the Division of School Facilities. In interviews with high school principals, EPP learned that students labeled "long-term absentees" were kept on the books for months even though they had not been present. Beyond an understandable uncertainty about whether these students had dropped out, there was also was the delicate issue of the budgetary impact of deleting these students' names from the schools' enrollment. It was disconcerting for EPP members to tour some high schools at "over 100 percent utilization" that did not seem very full and visit other high schools with the same statistical profile where the halls were so crowded at bell time that it was a wonder that any students were able to reach their classes on time. After an exposé by the Moreland Commission of high school student enrollment and attendance figures, the Division for High Schools has changed its methodology for counting enrolled students.

There is no widespread uneasiness about the Division of School Facilities statistics on elementary and middle school building utilization. In fact, Community School Boards, Superintendents, and parents have complained that they are too hard-nosed. Nevertheless, EPP has also toured elementary and middle schools, especially in one district, that supposedly are at "100 percent utilization" and did not observe well-attended schools. We do not know the source of this problem, but there are several explanations. Low-attendance rates by students, where 10 to 15 percent do not show up on any given day, may be one. Another explanation is that the forms submitted to the Division of School Facilities may be incorrectly filled out.

√ **Recommendation: Hire outside consultants to conduct building capacity and utilization surveys as well as advise on better use of space.** The Board of Education hires a consultant to project where enrollment increases and decreases will occur. School-based staff, however, need more help in better utilizing the space they have. Donna Meeks of the NYC Comptroller's Office has found in her visits to schools that there is unused space in cafeterias in older buildings. In the past, the goal was to serve all children at once, but current practices in most schools are to serve children in shifts. One or two classrooms can be constructed from unused cafeteria space. Just as the Board of Education relies on outside consultants to conduct surveys on the need for school repairs in order to provide some credence to its capital plan, it should rely on outside consultants to survey school utilization and find ways of helping school-site staff better utilize their existing space. These consultants should also be charged with resolving the misalignment between standards and practices in determining which facilities or rooms within facilities are "overcrowded." In particular, standards for overcrowding based on the NYC building codes need to be aligned with the UFT class-size limits.

√ **Recommendation: Require each community school district to develop a plan to reduce school overcrowding.** With community and union participation and the help of outside consultants in our preceding recommendation, community school district superintendents could develop the same processes that have resolved UFT class-size grievances in some districts. These plans then need to be monitored to ensure that required changes in school reconfiguration take place within a reasonable period of time.

SECTION III SOLUTIONS

Chapter 9 Rational and Transparent Budgeting and Planning

Section I of this report describes the clash of professional values that have resulted in allowing student overcrowding to continue. In this chapter, we make three recommendations for resolving these conflicts. First, EPP proposes that the capital budget for the schools be split into three distinct capital budgets so that there is no "drift" between priorities and funds for ending overcrowding are protected. Second, two of these capital budgets should be based on objective formulas of each school district's overcrowding problem and need for capital repairs. And third, we recommend a process for planning that ensures decision making by district and school staff as well as parents.

We have modeled these recommendations on the remarkable progress that one state has made in solving its facilities problems. Arizona, with 1210 schools (about 100 more than New York City), adopted a Students FIRST facilities plan as a result of a 1994 court decision (*Roosevelt School District #66 vs. Bishop*) that found its system of capital financing a violation of the state constitution. Four years later, after a court-imposed deadline for a remedy and a fierce legislative battle, a School Facilities Board was created to guide the state's takeover of all capital projects for the schools. While 100 percent state financing puts Arizona far ahead of most states' school facilities programs, its capital budgeting and planning structure is what has impressed the Educational Priorities Panel. Adapted to New York, it could improve city and state budgeting and planning for school facilities.

√ **Recommendation: Create three separate capital budgets for 1) Creating More Classrooms, 2) Capital Repairs and System Upgrades, and 3) Emergency Repairs. The capital budget for Creating More Classrooms should represent a 30 percent share of all capital allocations for school facilities. The creation and upgrading of science labs in high schools should have a high priority in the budget for Capital Repairs and System Upgrades.** Arizona's Students FIRST legislation created three funds: *the new school facilities fund*, which so far has approved the building of 86 new schools and 26 additions to existing schools at a cost of $1 billion; *the deficiency correction fund*, which so far has identified almost 6,000 capital repair projects at a cost of $740 million and a 30-item checklist of minimal upgrades for all schools (which include microscopes, furniture, books, two-way intercoms, and fire alarm systems) which will bring the total estimates of costs to $1.1 billion; and *the building renewal fund*, to extend the usable life of school buildings, including upgrades of heating, cooling, and plumbing systems. $280 million has already been expended, but this fund will increase by more than $130 million for the next school year.

It should be understood that the NYC Board of Education's capital plans have always had similar categories in its presentation of its capital budget. The Board of Education's detailed plan, however, is more of a marketing tool geared to legislators' concerns about getting a "fair share" than an accurate list of projects that will, in fact, be undertaken. Moreover, project-by-project lists, seemingly so concrete and detailed, have hidden the changes in priorities in New York City's capital planning process. Arizona, so far, has allocated 42 percent for the construction of new schools, 31 percent for capital repairs, 15 percent for meeting minimum standards, and 12 percent for building system upgrades. *In contrast, the Board of Education's expenditures, as reflected in its last capital plan, are 18 percent for new schools and 82 percent for repairs and system upgrades. On the basis of expenditures, only 12 percent of funds has gone to the building of new schools.* In Arizona, there is a clear recognition that new schools take first priority and capital repairs take second priority and that funding for system replacements has the lowest priority and will only increase slowly after the student needs have begun to be addressed. In New York City, on the other hand, funding for system upgrades has displaced funding for new schools.

The advantage of three separate capital budgets for school facilities is that it would put a brake on the dynamics that have reduced funding for the creation of classroom space: 1) the need to create enough projects in each legislator's district to satisfy their values of "fair share" and 2) the focus on system upgrades which are of greatest concern to facilities professionals. The public, for the first time, would be able to measure the extent to which the problems of overcrowding will be addressed by the capital plan.

Nevertheless, the creation of these three distinct budgets does not entirely solve the problem of the displacement of educational objectives. The court-ordered correction of deficiencies in Arizona *compelled* facilities professionals to upgrade science labs. In spring 2000, as a result of inspections by the United Federation of Teachers and the New York Committee for Occupational Safety and Health under a state-funded grant, the Board of Education finally agreed to correct potentially dangerous conditions in some labs, including the installation of acid storage cabinets and more fire extinguishers. This agreement does not help high schools and middle schools without science labs. While $57 million in the capital plan has been earmarked for science labs, the Chancellor has estimated that $500 is needed.

√ **Recommendation: Base two of these capital budgets, for classrooms and capital repairs, on objective, citywide surveys of need, not a list of projects.** Because the Arizona School Facilities Board is responding to a court-imposed deadline to bring all schools up to minimum standards by 2003, funding had to rely on estimates. There was no project-by-project list presented to legislators. The School Facilities Board was required by the Students FIRST law to hire an outside consulting firm to visit and to conduct a survey of the physical conditions of every school in the state. An electronic database was created to compile and analyze the information. The survey found that rural schools had the greatest needs for repair and, in some cases needed entirely new schools, because the cost of correcting the problems would have exceeded new construction. On a per-school average, the estimates for bringing buildings up to minimum standards were only $142,000 in affluent suburbs, $860,000 in urban areas, and from $970,000 to $1.3 million in rural and remote areas.

The Board of Education, since the early 1990's has conducted similar surveys of relative building conditions by outside consultants. The last one, completed in 1998, is named the Building Conditions Assessment Survey, which looked at upwards of 251 components in each building (such as wiring, roofing, plumbing). BCA surveys gave a rating of 5 for components of buildings in greatest need for repair and 1 for those with the least. This survey rating system was used to identify the projects listed in the Board of Education's last capital plans. In the future, this initial survey should be compared with a similar survey done at the completion of the current capital plan to measure the effectiveness of this capital plan. Too often, the Board of Education changes its methodology in measuring student achievement and in conducting other assessments, thus making it difficult to longitudinally evaluate improvement. Maintaining a consistent survey methodology for measuring building repair needs is critical.

Given the legislative process, the "fair share" concept will not die an easy death. The reason it cannot be entirely eliminated is the political logic of securing a majority vote. "Fair share," however, can be made more intelligent, so that the concept of "shares" is driven by a master plan that will target funding appropriately. The distribution of funds in each of the two budgets should be based on a survey formula for each school district, *not specific projects.* For example, each legislator's district will receive a "fair share" of a capital repair budget based on the survey's rating for state of disrepair for the school districts within her/his district. When districts with high disrepair ratings begin to approach the average for lower scoring districts, allocations by Council districts will begin to be more similar.

It is of some note that the Board of Education has based its capital repair program on survey findings by outside consultants, but has not developed the same system to track and analyze

school overcrowding. Once again, the explanation is that the creation of a reliable survey of building conditions was court ordered as a result of the lawsuit brought by the United Federation of Teachers mentioned earlier in this report. The utilization analysis now conducted by the Board of Education should be done by an impartial consulting firm that would create a district-by-district rating for capacity needs to end overcrowding and to build additional classrooms. Obviously, Councilmembers whose schools functioned at undercapacity would not see a "fair share" of these funds, but as overcrowding is reduced through better targeted funding, capital repair funds would become more plentiful. This is the incentive built into the Arizona facilities plan. If overcrowding is reduced and most buildings reach a stage of reasonable repair, a new capital budget could be created that is not based on a crisis, but based on extending the usable life of school facilities. This would most likely be proportionate to the number of schools and square footage of building space within a school and legislative district. It is important that this budget begin with low funding so that initially most resources go to ending overcrowding and capital repairs.

Currently, the "carrot" dangled in front of elected officials and the public is the false promise that the newly proposed capital plan will build enough schools to reduce severe overcrowding, when in reality facilities professionals are attempting to extend the life of the buildings already in existence. A better "carrot" would be the assurance that once the most pressing problems affecting instruction are addressed, more funds will be available to stop the physical plant from falling into disrepair. Legislators, in other words, would have to ensure that funds are initially targeted so that ultimately, when children in all school districts have fairly similar instructional environments, capital funds will no longer go disproportionately to some legislative districts and not to others.

√ **Recommendation: Ensure informed decision making by district and school staff as well as parents by providing each community school district and high school district with the services of an engineer or architect.** Centralized policy making and standard setting can co-exist with local decision making. The Arizona Facilities Board has only 20 full-time employees. Nine project management firms, selected through a competitive bidding process, work on overseeing multiple projects. In order to lower costs, bids are solicited from contractors for multiple projects, a practice not that different from the those first instituted by the Board of Education under a former Executive Director of the Division of School Facilities, Robert Buxbaum. In Arizona, a uniform computer software system is used to track the progress of every project and to encourage communication between School Facilities Board staff, their consultants, and district superintendents, district architects/engineers, and school board members. The School Construction Authority has set up a similar system, but it does not function well. For this reason, former Queens Borough President Claire Shulman initiated a legendary war room to coordinate each project by bringing together staff from the School Construction Authority, the Board of Education, and school district superintendents. The problem, however, is that a similar level of coordination does not exist in other parts of the city.

EPP has a better idea for ensuring meaningful communication between school and district staff and the facilities bureaucracies of the SCA and the Division of School Facilities. Arizona again serves as model, not because it hires outside consultants, but because it has created a system of balances between centralized policy making and local decision making. In that state, each school district hires an architect and/or engineer, using a uniform agreement drafted by the School Facilities Board. These district facilities professionals *do not issue bids or select contractors*, thus eliminating a potential source of graft and corruption. But these professionals vastly improve the school districts' understanding of their facilities problems and help them shape the prioritization of projects. By providing school districts in Arizona with the capacity to participate meaningfully in their districts' facilities plan, the assessment process is particularly thoughtful and eliminates some of the problems that have plagued project coordination and communication at the local level in New York City.

In Arizona, before the outside consulting firm visits the school district to conduct a survey of the capacity and repair needs of every school, the superintendent prepares a document of the needs she/he has already identified through the assistance of the district's facilities staff person, principals, board members, and parents. After the survey is concluded by the outside consultant, the district has the opportunity to review the report prepared by the consultant and to agree upon the number of repairs and the nature of the repair problems, but not the assessment of the cost of the projects, which is left up to the School Facilities Board. The project management firm, once selected, has the dual responsibility of reporting to both the school district and the State School Facilities Board. What puts teeth into this dual responsibility is that the school district architect/engineer has to certify that the project has been completed before payment is made to the contractor and project manager. Interestingly, the Facilities School Board only pays for *completed* work and does not make partial payments as the project proceeds.

In contrast, in New York City, the centralized facilities staff cobbles together a list of hundreds of capital repairs projects and new schools in preparation for each capital plan. Supposedly, these lists and the prioritization of projects have been created through an analysis of survey results and consultation with district superintendents. Superintendents, who mostly have only plant managers (supervisors of custodians) as a resource or a Deputy Superintendent willing to troubleshoot, are often mystified about why some projects appear on the list and others do not. Often they don't complain because they assume that a "political deal" is the reason. Superintendents and their staff members often do not have the technical expertise to catch errors. For this reason, the School Construction Authority is most often the first to discover the true nature of the repair problem.

Unlike the checks and balances of Arizona's facilities planning process, where the work of the outside survey consulting firm is reviewed by a local facilities professional, New York City's only check on errors by the Board of Education's Division of School Facilities is another bureaucracy even more distant from the concerns of the school district. By leaving specific projects *unlisted* in the Board of Education's initial capital plan (and instead using an estimate of projected funds based on the survey ratings for their districts), school districts could work with the Board of Education and the School Construction Authority to develop their own priorities. At an average of $80,000 for hiring an architect or engineer (or securing their consulting services), the cost of providing each school district with the capacity to provide a meaningful role in prioritizing and reviewing the scope of projects would come to an annual expenditure of $3.2 million (including fringe costs and salaries or consulting fees based on the square footage of each school district's physical plant).

In 1994, the Educational Priorities Panel worked with the Chairperson of the Assembly's Education Committee, Angelo Del Toro, to draft requirements that school and district committees made up of principals, custodians, and parents have input into the prioritization of repairs in their district and school. Assemblyman Del Toro inserted these requirements into legislation providing Minor Maintenance funding for the Big Five city school districts. EPP members were pleasantly surprised that the legislation passed. Unfortunately, Assemblyman Del Toro died shortly afterwards and was not able to oversee the implementation of his law. EPP soon discovered that Board of Education facilities staff was releasing the funds in very small increments, and so little was available at any one time that many school facilities planning committees used Minor Maintenance funds to buy locks on classroom doors. Division of School facilities staff, in defending their actions against EPP criticisms, argued that custodians and parents were more likely to identify repair problems that were visible to them and ignore other problems that could be identified only by an architect and an engineer. But the Board of Education has done nothing in the ensuing years to create facilities planning capacity at the school district level.

In 1998, legislation again passed in Albany requiring that advisory Health and Safety Committees be created to survey environmental hazards. The Healthy Schools Network reports

that, as yet, neither the State Education Department nor the NYC Board of Education has come up with any plan or agreement for establishing these Health and Safety Committees.[47] The lack of local input by superintendents, principals, custodians and parents remains a contributing factor in the high degree of frustration and anger at the schools facilities planning process. The Arizona model provides a mechanism to give local education staff and parents the capacity to provide meaningful input and to create a system of checks and balances that will result in better planning, prioritization, and estimation of the scope of projects.

√ **Recommendation: Quickly reform the city's capital budgeting and planning process for school facilities in anticipation of a state restructuring of school district funding.** Knowledgeable commentators have opined that the Court of Appeals will probably rule on the Campaign for Fiscal Equity lawsuit in 2003 at the earliest. With rare exceptions, most similar court rulings in other states have been followed by legislative battles over funding even *after* judges have set deadlines for compliance. 2005 is a highly optimistic guess about when much needed additional state funding would be available from the state. Hopefully, the New York Governor and legislature will follow Arizona's lead in having the state assume most of the costs of building badly needed new schools and bringing most schools in high-needs and low-wealth districts up to adequate standards. But these are all conjectures.

The facilities needs of New York City are so huge and pressing, however, that *we cannot make school children wait until the end of the decade — or the next — to have adequate instructional environments.* Furthermore, unless the city makes progress in its own building program and turns around its conflict-ridden and duplicitous capital planning process, state legislators will be reluctant to drive a significant share of state facilities funding to New York City. State investment will be more likely if it can be shown by example that significant progress has been made in New York City and that more state facilities funding will be able to bring city school facilities up to adequate standards. The fear that state funds will be thrown in a "bottomless pit" must be assuaged.

In 2001, the Chancellor announced that he would recommend that the School Construction Authority take over of the Board of Education's facilities functions. While this change may put an end to the constant combat by these two bureaucracies, *it provides no assurance that instructional priorities will be addressed or that the conflict of professional values will be resolved.* The creation of three capital budgets for schools (two of them based on a formula for need rather than a listing of projects) and the creation of capacity of local community school districts to provide input and oversight on projects are the best hope of moving forward the capital planning process for the schools. If these processes succeed, as they have done so far in Arizona, the legislature will have a working model that can be adopted for the entire state.

[47] In the last year of the Clinton Administration, New York State became eligible for $105 million for school and safety repairs. New York was one of the few states that failed to submit an application by the original deadline at the end of 2001. Had these Health and Safety Committees been established, these funds could have become available much sooner.

Chapter 10 Six Low-Cost Strategies to End Overcrowding

In order to reduce severe overcrowding and reduce average class sizes in the early grades, EPP's recommendation is that the proportion of the city's total capital funding that should go to the school repair and new school construction should be increased to an annual average of 40 percent over the next five years. In three out of the last five years, the proportion of total capital expenditures that has gone to school facilities has been close to or exceeded 30 percent, so we are not seeking a dramatic increase. In current dollar terms, the recommended increase would be from the current $7 billion five-year capital plan to a $9 billion plan. This is far less than the requests of Chancellors that were based on an estimated need of a ten-year investment of between $25 billion to $31.6 billion to build new schools and bring older schools to a state of good repair.

Why is EPP making such a modest recommendation? First, it is doubtful that any construction agency can successfully handle more than a $2 billion annual building and repair program. Secondly, EPP believes that the creation of additional classroom space should be done as *inexpensively* as possible. Our third, and most important reason for recommending a 40 percent share of capital spending is that EPP has come to the conclusion that, while the city does not face an imminent debt crisis, its ability to issue more bonds in order to significantly increase its capital budget is somewhat limited.

The ultimate impact of the catastrophe of the World Trade Center bombing is another unknown factor at the time this report is being drafted. We cannot know whether the flood of federal dollars and support will help the city's efforts to upgrade its infrastructure or whether the costs of rebuilding the physical and economic infrastructure of the financial district will strain all available federal, state and city resources. Whether the economy will improve is also unknown.

The public, according to polls, believes that education is still in crisis, so there is hope that New York City officials will not repeat the mistake they made during the fiscal crisis in the mid-1970's. *While the city emerged from bankruptcy, elected officials allowed the public school system to remain in a fiscal crisis.* For the first time in the state's history, the per-pupil expenditure in New York City fell below the average of the state. Now New York is in the bottom third of all school districts in the state in terms of per-pupil resources. But progress in improving academic performance is still possible, despite the lack of resources. The announcement by the Chancellor in September 2001 that there was a 3 percent drop in the number of students testing in Level 1 is evidence of modest improvement in student achievement. Though better school performance will reduce student overcrowding, *the irony is that many schools need more classroom space in order to put into place strategies, such as smaller class sizes and the reduction of severe overcrowding, that could improve their students' academic performance*.

The Board of Education must begin to view the creation of extra classrooms with urgency, including a resolve to ignore "turf" issues among central divisions, districts, schools and neighborhoods. Because schools must still be repaired, the majority of capital funding for schools must still be spent in bringing schools up to a state of good repair. We advocate that the next capital plan have three capital budgets, with 30 percent of all funds going to the creation of more classrooms. Here is a list of EPP's recommendations for quickly creating instructional space so that children can learn better:

√ Recommendation: Reconfigure schools to reduce 45 percent of student overcrowding, and create 24 new elementary schools in eight community school districts and 5 new high schools in Queens to eliminate all overcrowding by the end of the next capital plan. In 1997, a consultant retained by EPP, using September 1996 Division of School Facilities reports on utilization of elementary, middle, and high schools, found that, on the basis of a strict numbers analysis, the conversion of 25 under-utilized middle schools

into small high schools would eliminate overcrowding in the 22 high schools that were functioning at 140 percent of capacity in October 1995. The conversion of underutilized elementary schools to kindergarten-to-grade-eight organizations would allow for additional middle schools to be converted into high schools, and this would ameliorate overcrowding in 44 high schools that were operating at 120 percent of capacity in October 1995. At that time, high school overcrowding in the Bronx and Brooklyn could have been substantially eased by conversions of underutilized middle schools within each borough, *but reconfiguring schools was not a strategy that could help Queens*. EPP recommends that the five new high schools for Queens that were originally in the current capital plan should be built or leased.

The response to our study by Board of Education officials in January 1997 was that communities would not welcome an influx of teenagers from other neighborhoods and that parents would not welcome sending their children into other neighborhoods. Furthermore, we were told, community school boards were very proprietary about the schools within their jurisdiction and would not tolerate the conversion of a middle school into a high school that would fall under the jurisdiction of the High School Division.

Yet there is much to recommend these conversions. They would result in high schools that are within the range of the national average for high school size, 800 to 1000 students. Most middle schools have already existing science labs and gyms and are built for older students, so conversion costs would be lower. In many cases, high school students could be educated within their own neighborhoods. Our assumption is that these new high schools would be joint partnerships with community school districts, thereby allowing for better articulation between middle schools and high schools.

This study was done before reforms in high school enrollment and attendance were instituted and before the dropout rate began to rise. Today, the most severe space crunch remains in the elementary schools. *Because so many middle schools remain underutilized, the conversion of elementary schools and middle schools to K-to-8 school organizations could be a significant strategy to reduce overcrowding.* Part of the strength of parochial schools in the city is that they tend to be K-to-8 schools and thus perceived by parents as safer and more orderly for young adolescents. A study by the Philadelphia school system has found that this grade configuration produces a slight advantage in the academic performance of middle grade students, possibly because of the smaller school size.[48] EPP has also learned of two middle schools in New York City that have not been reconfigured entirely, but merely allowed pre-K, kindergarten, and first grade classes to be held in their unused classrooms. Parents were initially concerned that adolescents would harm these young children, but when the schools included these new grades, student behavior improved dramatically.

In Appendix 1, Table 17 and Charts A, B, and C show that there could be a significant reduction in elementary school overcrowding in twelve community school districts if grades in underutilized middle schools were reconfigured. Because of limits in how much the city's capital plan could be increased, which was discussed in Chapter 5, EPP wanted to ascertain the minimum number of schools that would have to be created, through new construction or leasing, that would be needed *after* each community school district and high school district reconfigured schools to reduce overcrowding. EPP is well aware that this is a hypothetical exercise and each district has constraints in redistributing students so as to better equalize building utilization. Nevertheless, our analysis shows that there are only eight community school districts that require new schools because a reconfiguration of their existing schools will not reduce their overcrowding problems.

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[48] Robert Offenberg, *The Efficacy of Philadelphia's K-to-8 Schools Compared to Middle Grades Schools*, Middle School Journal, March 2001.

Table 9: Gross and net overload, excess capacity, and schools needed in main elementary school buildings by district, 2001

District	Gross excess capacity (underload)	Gross overload	Net overload / excess capacity (gross overload minus gross excess capacity)	New Schools Needed to relieve gross overload	New Schools Needed to relieve net overload
1	-2,920	1	-2,919	0	0
2	-2,798	315	-2,483	1	0
3	-3,358	0	-3,358	0	0
4	-2,286	62	-2,224	0	0
5	-2,214	158	-2,056	1	0
6	-46	2,041	**1,995**	4	4
7	-1,955	28	-1,927	0	0
8	-1,849	459	-1,390	1	0
9	-1,970	1,330	-640	2	0
10	-730	2,253	**1,523**	4	3
11	-355	2,211	**1,856**	4	3
12	-2,320	109	-2,211	0	0
13	-3,928	0	-3,928	0	0
14	-3,453	340	-3,113	1	0
15	-2,525	594	-1,931	1	0
16	-2,874	100	-2,774	0	0
17	-1,569	1,088	-481	2	0
18	-895	444	-451	1	0
19	-2,633	426	-2,207	1	0
20	-377	1,258	**881**	2	2
21	-1,780	295	-1,485	1	0
22	-1,157	1,030	-127	2	0
23	-1,157	232	-925	1	0
24	-171	3,070	**2,899**	5	5
25	-725	437	-288	1	0
26	-745	613	-132	1	0
27	-1,182	3,363	**2,181**	6	4
28	-1,063	926	-137	2	0
29	-511	1,340	**829**	2	2
30	-830	1,540	**710**	3	1
31	-2,486	1,256	-1,230	3	0
32	-1,448	442	-1,006	4	0
Totals	-54,310	27,761	-26,549	56	24

Source: EPP calculations from data in the New York City Board of Education School Facilities Enrollment - Capacity - Utilization, 1988-1989 and 2000-2001

The estimates of schools needed were created by assuming that schools would accommodate about 600 students each and that an overload of at least 150 students was sufficient to justify building a new school.

√ **Recommendation: Create more new schools through leasing** In 1991, the Educational Priorities Panel adopted a policy to encourage the creation of more new schools by leasing buildings and converting them into schools. One of the advantages of this strategy is that leased facilities tend to be smaller and the classroom spaces within them also tend to be smaller in contrast to the large schools that the Board of Education builds. The Timpane Commission strongly recommended leasing in its 1995 report because of the city's cyclical history of enrollment growth and the speed within which new schools could be created.

For over a decade and three Board of Education capital plans, Queens has been promised the construction of most of the new schools, but many of them have failed to materialize. Because severe overcrowding has continued to plagued this borough, EPP reviewed Office of Management and Budget documents to see the extent to which leased space has been used to create new schools and annexes.[49] We were surprised to learn that, while school districts in Brooklyn had a total of 851,666 square feet of leased space for schools and those in the Bronx had 559,165, Queens districts had only 335,832 square feet. But square footage does not give the full picture of the consequences of relying mostly on new construction. Rented space created 22 schools, early childhood programs and annexes in Brooklyn and 24 in the Bronx, but only 14 in Queens, the borough with the city's most overcrowded schools. The over reliance on new school construction by Queens districts is partly to blame for the persistence of overcrowding in their schools.

There is also another dynamic behind access to leasing: political clout. In 1992, a consortium of important foundations created 35 very small schools, serving mostly students from grades 6 to 12. Though some of these schools were located in larger school buildings, part of the reason that these "New Visions" schools were able to start within a one or two-year time span is that community groups, responding to a request for proposals from the Board of Education and the foundations, identified space that could be rented. While there have been continuing complaints about problems with landlords and other tenants, inadequate building maintenance, and the lack of science labs and sports facilities, these rented school sites have had an unintended benefit. Class sizes had to be small because the rooms were small. *Unfortunately, since the early 1990's there has not been a concerted push to create large numbers of small schools through leasing.*

Local working-class neighborhood groups seeking to start new schools through leasing have been repeatedly frustrated by the disinterest of Board of Education officials. Two not-for-profit organizations, the Northwest Bronx Community and Clergy Coalition and the Cypress Hills Advocates for Education, have developed outlines for a leasing program to create schools and reduce overcrowding. They are working with a larger coalition of not-for-profit groups, the New York City School Construction Working Group, which has developed a model for a leasing program that meets community needs and avoids some of the drawbacks of leasing from private sector landlords. More affluent parents, such as a group of parents in the upper East Side who want a new high school, recognizing that they will get a low priority in the capital plan because their schools are not as overcrowded as high-immigrant neighborhoods, have been more successful in getting a commitment to secure leased space to create new schools.

There is, however, a small-scale effort at creating new schools that is now underway. Under a proposal by the Schoolhouse Foundation, the Board of Education would commit to lease space specifically designed and constructed as a school by the Schoolhouse Foundation. On the basis of this commitment, bonds could be secured by the Foundation to build new schools. After 15 years, the leased buildings would be turned over to the city. The criticism leveled against the Schoolhouse Foundation and other efforts to spur more rentals of school buildings is that it is more expensive, over the long term, to lease than to build. There are two answers to this. First, if leases become eligible for state Building Aid, then the net costs to the city could be lower. Second, comparisons of 30-year costs may be misleading. There should be no requirement that leases be

[49] April 2001 OMB briefing material, budget codes 0656 and 0657.

for 30 years. The advantage of a rental strategy is to prevent the overbuilding of schools that occurred in the Lower East Side and the South Bronx.

One barrier to a more ambitious leasing program is confusion as to the current expenditures for leasing, which makes comparisons with building new schools difficult to ascertain. In 2000, EPP calculated that a one-time $150 million expenditure for renovations and first-year leases would create 1051 classrooms, or 21,020 seats. These calculations resulted in an estimate that the per-seat cost of leasing was $7,136 in the first year. As the basis for our calculations, we used the typical leasing costs that appeared regularly in the Board of Education's monthly meeting calendar. The Independent Budget Office secured different and much higher figures from the Board of Education and calculated the cost over the life of the capital plan, which came to $24,299 per seat.[50] Neither IBO or EPP factored in the availability of state Building Aid for leases. However, a far more serious barrier to an ambitious leasing program is the fear of corruption by city and Board of Education officials. This fear, unfortunately, is well-founded. There could be mechanisms, however, to prevent collusion in the selection of landlords and in setting rental prices.

√ **Recommendation: Build additional stories on school buildings or playgrounds** A problem not faced in Chicago and Los Angeles, where many public schools were built on generous plots of land, is that in many New York schools there is no space around the school. The NYC Comptroller, in particular, has identified "building up" as a cost-saving strategy to reduce overcrowding. The response of the Division of School Facilities and the School Construction Authority has been that in many cases the building of additional floors above the top floor poses expensive structural problems. The building codes for school construction have required load-bearing weights for floors that are among the highest for all buildings in the city. Nevertheless, EPP has wondered why the space above playgrounds has been ignored. Besides providing a covering to the playground so that children can play outdoors even when it rains, the structural and design difficulties of building two to three stories above a playground do not seem complex. This type of "building up" of additions also lends itself to pre-fabricated classrooms and would result in a better rate of reimbursement from state Building Aid. Table 8 in Appendix 2 shows that the cost per-seat of building additions is $30,816, which is below the $38,381 per-seat cost of building new schools. A review should be commissioned to see if building above playgrounds could substantially lower the per-seat cost of building additions and eliminate the use of Temporary Classroom Units. Many of these TCU and trailers are placed on playgrounds, eliminating play space. One of the problems with this recommendation is that classroom additions create larger schools, so we do not mean to advocate that a substantial amount of overcrowding should be reduced through the building of more additions.

√ **Recommendation: Build more Early Childhood Centers and mixed-use buildings** At the beginning of the 1990's and then again at the beginning of Chancellor Crew's administration, there was a fleeting interest in the construction of mini-schools or early childhood centers that would serve pre-kindergarten children through to third or fourth grade students. One of the strong arguments for ECC's is that these types of schools can be built on smaller plots of land, which are easier to find, and they do not require expensive kitchens, gyms and auditoriums. Cheaper to construct, early childhood centers receive a higher proportion of state Building Aid reimbursement. Mysteriously, very few of them have been built. Among educators, the issue can be controversial because it sets up yet another transition between schools and potentially leads to the isolation of early childhood teachers from the instructional issues of the higher elementary grades. But even the construction of early childhood centers that primarily serve kindergarten students along with three and four year olds would help to solve an urgent problem in severely overcrowded school districts — the lack of space for pre-K programs. Elementary schools could then drop their kindergarten classes and reduce their class sizes from first to third grade. While the

[50] August 14, 2000 letter to the Educational Priorities Panel from the Associate Director of the NYC Independent Budget Office.

per-seat cost of constructing a mini-school is $17,000, some early childhood centers have cost $57,413 and $62,340 for reasons we do not fully understand (see Table 1, Appendix 2).

Potentially, early childhood centers could lend themselves to a variety of creative public-private partnerships. A commitment by the Board of Education to lease space for kindergarten annexes from child care providers would allow these providers to better finance the expansion of their current facilities or to construct new facilities. The presence of certified Board of Education teachers would enhance the professionalism of the child care staff and the "school readiness" component of pre-kindergarten programs. Some of the problems of transition and articulation between the two systems could be reduced.

The same positive effect could result if the Board of Education built the early childhood centers and then leased space to reputable not-for-profit child care providers. Besides being eligible for state Building Aid, these mixed-use facilities could be financed through the Board of Education's School Construction Fund bonds, which do not count towards the city's debt limit. This Fund, intended to encourage mixed-use buildings that could house public schools, has languished. Literature on these types of arrangements are replete with examples of resistance to them by educators, sponsoring landlords, and neighborhoods due to concerns about safety and congestion. But, if well-designed and structured, these mixed-use buildings could help to solve the problem of insufficient land, a key barrier to building schools in New York City. Building small schools above one and two-story commercial strips, with entrances on side streets, might be another creative mixed-use concept.

√ Recommendation: Create year-round scheduling for some high schools
Overcrowded schools are less expensive to operate than schools on a year-round schedule, as a 2000 Task Force on Year-Round Schooling headed by Board of Education member Terri Thomson discovered. Twelve-month staff coverage in order to increase the student capacity of buildings by one-third is more costly than continuing with a double shift of students in overly large classes. This became eminently clear when Terri Thomson's Task Force prepared a carefully drafted resolution that would have required all newly constructed high schools in Queens be built for year-round use. A slim majority of members of the Board of Education voted for this resolution. The Mayor's representatives on the Board of Education believed that year-round high schools would be too expensive to operate. This still requires a change in education law. As this report is being drafted, the state legislature is considering legislation to amend the education law to allow year-around schooling. *As it stands, the Board of Education's current capital plan will not reduce overcrowding in Queens high schools.* While the Citizen's Budget Commission recommends year-round schooling for all overcrowded schools, this type of scheduling has proved to be unpopular. By piloting it at the high school level, where the "choice" program allows students to go to other schools and where it faces less likely resistance from parents, the chances of its success are higher. But the cost savings in the capital plan would have to be offset by the increased costs to operate these year-round schools.

√ Recommendation: Provide city tax credits for land donations where new schools are needed. In Arizona, the School Facilities Board has provided generous tax deductions to individuals who donate land in areas of the state where new schools have to be constructed. In New York, the unavailability or cost of land in severely overcrowded districts has been a problem. If the city were to offer property tax credits for donations of cleared land in high density districts, the city would forego revenue for one year in return for a higher proportion of reimbursement for new school construction over the next thirty years. While fiscally conservative budget monitors have put forth a "pay-as-you go" construction program that would forego borrowing to build schools, a better "pay-as-you go" budget strategy might be only a one-year revenue loss in order to get cleared land in overcrowded school districts where finding suitable sites has been difficult.

Chapter 11 The Need for a Federal Role

The turnaround of our schools cannot take place without the creation of more classroom space. This discussion paper is a call for clear thinking and hard decisions. Left unsaid through much of the discussion is that "clear thinking and hard decisions" involve the abandonment of an aggressive program to bring all schools up to a state of good repair in the near future. *There are not enough city and state resources to meet instructional objectives and to also rehabilitate the physical plant of the schools.* Many government officials and representatives of the business community have come to the same conclusion, but their choice is to repair the schools and abandon instructional objectives. The Educational Priorities Panel has presented another point of view. For those who want to do both, we can only urge them to look at the budget numbers. While EPP still recommends that 70 percent of capital expenditures be used to bring schools up to a state of good repair, we know that making the reduction of overcrowding a priority will delay by some years bringing most schools up to a standard of good repair.

There is, however, another possibility. America's network of roads and highways would not be possible if they were the sole responsibility of local and state governments. It is time to ask whether we can have adequate school facilities without federal assistance. Our problems in New York City are duplicated throughout the nation, especially in many urban school districts. Even after George W. Bush assumed the office of the Presidency in January 2001, there was so much bipartisan support in Congress for federal resources for school facilities that it was not until the late spring that hopes began to fade for a school construction act.

The inability to pass this legislation over the opposition of Congressional leaders may be a blessing in disguise if hopes are kept alive for a federal role in funding school facilities. It provides an opportunity to rethink financing and legislative strategies. Though the Rebuild America's Schools Act was an ambitious program, it was structured to help school districts reduce their payments of principal and interest and reduce federal tax revenue rather than to provide direct facilities funding to school districts. The problem with this strategy is that low-wealth school districts and high-needs school districts may still have trouble borrowing capital funding. In essence, the proposed legislation is structured on a "spend-to-get" basis.

Republican State Senator Frank Padavan has been steadfast in calling for federal Impact Aid for school districts with high immigration. While Impact Aid has been provided by the federal government only for localities where military bases are located, there is an argument to be made that localities have no say in federal laws and regulations dealing with immigration. Federal funding and donations of land or a federal leasing program in high-immigrant neighborhoods could substantially ameliorate severe overcrowding.

Without these federal resources, however, hard choices are what we have left. Having visited grim school buildings where every rainstorm raises fear and where principals have told us of years of unsuccessful attempts to get repairs done, EPP fully recognizes how hard these choices are. But it makes no sense to have a new stove if you can't feed your children adequately. And it makes no sense to have better buildings without better instruction. Federal funding for school facilities would allow New York City children to have both.

Appendix One:
Overcrowding in the New York City primary schools in 1989 and 2001.

The tables and charts in this appendix are designed to explain the state of overcrowding in New York City elementary schools,[*] and to examine how overcrowding has changed since the inception of the School Construction Authority (SCA) in 1989. We use the most recent available data for enrollment and school capacity, which is from the Board of Education report, *School Facilities, Enrollment—Capacity—Utilization,* for the 2000-2001 school year. We compare this data to the state of overcrowding in the 1988-1989 school year (found in the BOE report for that year), and to construction data over the intervening period provided by the SCA.

Many studies of overcrowding focus on the **overload** or **underload**; that is how far over or under capacity the school is. Although these numbers are important in determining how many seats need to be created to relieve overcrowding, it is a misleading statement of the overcrowding problem. For example, suppose 1250 students are crammed into a school with a capacity of only 1000 students. The overload for that school is 250 students. But **all** 1250 students in that school must live with overcrowded classrooms, classes in gyms and storage rooms, or whatever the school needs to do to deal with its overcapacity. Because every student in an overcrowded school is effected by overcrowding, **the number of students in overcrowded buildings** is an important measure of the extent of the overcrowding problem. Many of the tables in this report focus on this figure. As the tables below will show, despite a considerable amount of construction in the last 12 years, about a quarter million students are in overcrowded schools (a figure that has remained basically constant for the last 12 years). The reason for this is that there was already a significant overcrowding problem 12 years ago, and increasing enrollment has largely swamped construction. Relocation of population within the city has also caused problems, leaving some community school districts (CSDs) with more schools than they need and giving others with far more students than they can handle.

Some overcrowding has been relieved by annexes, minischools, and Transportable Classroom Units (TCUs) or Temporary Classroom Buildings (TCBs). To speak of these as a group, this report defines the term "**auxiliary buildings**" as any building with classrooms other than a main school building. Many of these buildings are themselves overcrowded and to some extent their very existence is a symptom of overcrowding, but with a crisis of 250,000 students in overcrowded schools, the low cost of some of these schools make them an attractive alternative to deal with the immediate problem. Many auxiliary buildings have smaller classrooms than main buildings and therefore they are more often overcrowded than main buildings. This report examines main and auxiliary buildings both together and separately to create a more complete view of the state of overcrowding. It is important to note that the SCA defines building somewhat differently. It does not use the term "annexes." Many annexes are leased and do not appear on lists of SCA construction projects; others may be classified as an addition.

This report discusses some very preliminary estimates of the cost of relieving overcrowding by building more schools of various types. It also considers the feasibility of relieving overcrowding by relocating students between schools within school districts (tables to be produced). This report defines "**severe overcrowding**" as a utilization rate of 125% or more, and defines "**significant excess capacity**" as a utilization rate of 80% or less. It is shown below that one alternative to reduce severe overcrowding is to move some early grades (which tend to

[*] Some attention is also give to middle schools, but high schools are excluded from this report.

have significant overcrowding problems) to middle schools (which often have significant excess capacity).

One important fact to understand when looking at the problem of overcrowding is that there are two different ways to define it. Class-size standards focus on **overcrowded classes**. A class is overcrowded if there are more students in the class than the teacher is expected to handle. Thus, if a teacher is expected to handle 32 students in a fourth-grade class, but she has 36, the class is overcrowded by 4 students regardless of how much space is available in the classroom. However, **overcrowded facilities** are also important. Facilities are overcrowded if they have more students than can usually be expected to fit comfortably into space of a given size (20 square feet per student for first through ninth grade students, see below). A classroom that has the square footage to accommodate 30 students is considered underutilized if it has only 25 students in it, even if class-size standards set 25 students per class as a goal. The reverse is also true, a classroom that has the square footage to accommodate 20 students, will be considered overcrowded even if class-size standards and the union contract allow more students in a class without accounting for class size.

The BOE formula for determining the capacity of facilities attempts to take both crowded classrooms and crowded classes into account. For this formula, the BOE designates that each kindergarten student requires at least 35 square feet of space in a class of no more than 25 students. Thus, the capacity of a 700-square-foot classroom is 20 students, and the capacity of a 1,050-square foot classroom is 25 students, but a classroom larger than 1,050 square feet, only has a capacity of 25 students no matter how much larger it is. The BOE defines the needs for first through third graders as 20 feet per student, to a maximum of 25 students per class. Thus a classroom of 500 square feet or more has a capacity of 25 students. For fourth through ninth grade, students are said to require 20 square feet up and no more than 31 students per room (or 29 for Title I schools). Thus a classroom of 620 square feet or more has a capacity of 31 students.[*] The capacity formula also includes adjustments for room use and type of student and other factors.[†]

The BOE formula has changed slightly since 1989 to put a larger emphasis on square footage. According to the 1989 New York City Board of Education *School Facilities, Capacity – Enrollment – Utilization*, full-sized classrooms were expected to hold 25 kindergarten through third grade students and 31 higher grades students unless the school is Title 1, in which case the number reduced to 29. The report discusses the number of students that can be placed in a half-sized room, but there is little or no discussion of what square footage qualifies as full sized. Adjustments are also made for room use and student types, complicating the comparison of capacity figures over time.

The differences between facilities standards, class-size standards, and union contracts cause much confusion about what is an overcrowded school. Although the BOE defines 31 as the maximum number of students per classroom, it has signed union contracts that places a maximum limit of 32 students per class plus breakage.[‡] Because principals and teachers tend to focus on overcrowded classes, while the BOE report focuses on overcrowded facilities, there is often a large difference between conceptions of what is an overcrowded building. For example,

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[*] Figures come from *No Room to Learn*, the Public Advocates office 1999, p. 16.

[†] For details description of the capacity formula see the New York City Board of Education School Facilities Enrollment—Capacity—Utilization report, 2000 – 2001.

[‡] Breakage is the distribution of a small number of students that are considered to be too few to warrant creating an additional class.

imagine a school with 20 classrooms, each of which has the square footage to accommodate 30 students. According to the BOE's facilities report, this school has a capacity of 600 students. But, if the school is trying to meet a standard of no more than 25 students per class, the school cannot accommodate more than 500 students without creating overcrowded classes. If this school had 550 students it would be forced to find some kind of make-shift space for two classes, but this school is still counted as underutilized because it has adequate—if improperly configured—square footage. Principals have dealt with problems like this by putting dividers up in classrooms to turn one oversized room, into two undersized rooms, or by holding classes in gyms, in storage rooms, in stairways, and even in bathrooms.

The opposite case has also created conflicts. Imagine a TCU with 4 small classrooms, each with the capacity to hold 20 students. A principal who does not have enough teachers for class sizes any smaller than 25 will be forced to place 25 students, into each of those small rooms. Because none of the classes are overcrowded and the teachers are not overburdened, the school usually would not consider that TCU to be overcrowded. But because its square footage is inadequate, it is an overcrowded facility.

Overcrowding is a very complex problem. Small class sizes have proven to be very important for student achievement, but to get small class sizes, it is also important that the facilities have adequate square footage. Therefore, *both* of these concepts are important. This report uses data from the BOE; thus it focuses on overcrowded facilities rather than overcrowded classes, but the reader must understand that crowded facilities are only one facet of the overcrowding problem, and that the creation of adequate facilities is a key step toward reducing class sizes.

Capacity figures are collected by the BOE by surveying the local schools. The BOE claims that it thoroughly checks and double checks its data, but miscommunication between schools and the BOE creates occasional errors. Nevertheless, these figures reported by the BOE in its annual report are the most accurate enrollment and capacity figures available.

Table 1: Overcrowding in all middle and elementary schools in New York City in 1989 and 2001. In this table, all elementary schools, middle schools, intermediate schools, and junior high schools are grouped together, but high schools, which are not a subject of this report, are left out. All types of buildings including main classroom buildings, mini schools, annexes, and TCUs or TCBs are grouped together. Today, 40,000 more students are in overcrowded schools than in 1989. This increase has happened despite the construction that has been completed in this period (see Appendix 2). Unfortunately, construction has done little more than keep pace with increasing enrollment, but it has not been sufficient to reduce the overcrowding that has existed throughout the period. However, construction has been successful in reducing severe overcrowding (utilization rates above 125%). There are nearly 15,000 fewer students in severely overcrowded schools today than there were in 1989.

Table 2: Overcrowding in elementary schools, 1989 and 2001. This table shows that elementary-school enrollment has increased significantly in the last 12 years, as has the number of students in overcrowded schools, and the number of students in auxiliary buildings (annexes and transportable classroom units). The number of elementary school students in overcrowded schools has increased by more than 10,000 students or about 4.1%.

Chart 2A: Elementary school students in auxiliary buildings, 1989 and 2001 The number of elementary school students in auxiliary buildings (including annexes, mini schools, and TCUs) has nearly doubled since 1989.

Chart 2B: Elementary school students in TCUs, 1989 and 2001. The number of students in TCUs has increased from none in 1989 to nearly 16,000 in 2001.

Table 3: Changes in enrollment, capacity, net overload, and students in overcrowded buildings in New York City elementary schools, 1989 and 2001. This table shows that the number of elementary school students in overcrowded schools has increased by more than 10,000 since 1989. This increase has occurred despite the construction over the same period: capacity has increased by more than 76,000 seats, but this has been just enough to keep pace with rising enrollment. The large and increasing number of students in overcrowded schools is especially striking compared to the excess capacity citywide. In 1989, New York City elementary schools had 17,256 more seats than pupils, and in 2001, they had 24,752 more seats than pupils, but even so more than a quarter million students were in overcrowded schools. The reason for this is that some school districts have many more seats than students, while other districts have many more students than seats.

Table 4: Students in overcrowded elementary school main classroom buildings by district, 1989 and 2001. This table shows that there has been a great change in where overcrowding occurs. Seventeen districts have had decreases—some by as much as 6,000 students. But the other fifteen districts have had increases—one by more than 7,000 students.

Chart 4: Students in overcrowded elementary schools (main buildings only) 1989-2001. This chart illustrates the great differences in overcrowding and in the changes in overcrowding across districts.

Table 5: Students in severely overcrowded elementary schools (main buildings only), 1989 and 2001. This table reports the good news about overcrowding. Although there has been no significant drop in overcrowding over the past 12 years, there has been a significant drop in severe overcrowding (utilization rates of 125% or greater). The number of students in severely overcrowded elementary schools has dropped by more than 36,000 (or about 50%) over the last 12 years. This decline has been shared fairly well across the board, with only three districts reporting increases in severe overcrowding. Yet, 36,000 students remain in severely overcrowded main buildings. Therefore, a lot more needs to be done to eliminate the problem.

Chart 5: Elementary school students in severely overcrowded schools (main buildings only), 1989 and 2001. This table shows the nearly across-the-board decrease in severe overcrowding. Yet districts 11, 24, and 27 stand out has having high levels of severe overcrowding.

Table 6: Gross and net over- and underload (excess capacity) in elementary school main buildings, 2001. To calculate the over- or underload of each building, the capacity of the building is subtracted from the enrollment. If the result is negative the building has an excess capacity (or a negative overload). If the result is positive, the building has an overload. The **gross excess capacity** (or **gross overload**) of a district is obtained by adding up the excess capacity of all the schools that have excess capacity (that is, all schools with a negative overload). The **gross overload** of a district is obtained by adding up overloads of all schools that have an overload

(that is, all schools with positive overload). The **net overload / excess capacity** is obtained by adding all the schools together or simply by subtracting the excess capacity from the overload.* This table shows that there is a significant amount of overcrowded schools, even in districts that have excess capacity. Twenty-four out of the thirty-two districts have net excess capacity in elementary school main buildings, but only two of those districts have no overcrowding in any schools (districts 3 and 13). It seems possible to relieve a substantial amount of overcrowding by moving children to different schools in the same district. If all students could be distributed within districts to minimize overcrowding, only 8 districts would still have any overcrowding.

Chart 6: Gross excess capacity and gross overload, 2001. This chart shows that excess capacity (the white bars) is larger than the gross overload (the black bars) in most districts. This means that the district has more available capacity than it has students, but for some reason students are not distributed between schools within the district to eliminate overcrowding, even in districts with net excess capacity.

Table 7: Change in the net overload (-underload or excess capacity) in elementary schools, 1989 to 2001. This table shows that the city as a whole has a net excess capacity in elementary schools, which has actually increased since 1989. In 1989 there were about 17,000 more seats than students, and in 2001 there were nearly 27,000 seats than students. This is quite surprising since there are more than a quarter million students in overcrowded schools. The main reason for this seems to be that schools are in the wrong places. Building has not been able to keep pace with the movement of population throughout the city.

Chart 7: Changes in the net overload (negative if excess capacity) of elementary schools, 2001-2002. The pattern of this chart reveals that there have been very few reversals in overcrowding in the last 12 years. Most of the districts that had excess capacity in 1989 continue to have excess capacity today—some have more; some have less. Most that had a net overload in 1989 continue to have an overload today—some larger, some smaller. This shows the same pattern as charts above—a construction program that has been able to keep pace with rising enrollment, but has not been able to reduce overcrowding in the system as whole.

Table 8: Capacity of main elementary school buildings by district (1989 and 2001). This table shows that there has been a substantial increase in capacity of main buildings (more than 59,000 citywide, and more than 6,000 in some districts), but as other tables below reveal, it has not been enough to relieve overcrowding in most districts.

Chart 8A: Capacity of main elementary school buildings by district (1989 and 2001). This chart shows the pattern of capacity around the city in 1989 and 2001. This pattern has not changed quite as much as enrollment (Table 14 below), which is part of the reason that the number of students in overcrowded buildings has increased despite the increase in the net excess capacity in the city as a whole.

Chart 8B: Change in capacity of main elementary school buildings, 1989 to 2001. The pattern of the change in elementary schools loosely follows the change in enrollment (Chart 14B, below).

* Because we are designating excess capacity as a negative number, technically the negative gross excess capacity is added to the gross overload.

Chart 8C: Percentage change in capacity of main elementary school buildings, 1989 to 2001. The pattern of the change in elementary schools loosely follows the change in enrollment (Chart 14C, below).

Table 9: Capacity of auxiliary buildings used in elementary schools by district (1989 and 2001). The capacity of auxiliary buildings in elementary schools has increased by more than 16,000 to more than 35,000 in the past 12 years. This amounts to more than 6% of all elementary school building capacity, and in District 24 auxiliary buildings amount to about 15% of capacity. The use of these buildings has made the difference between an increase and a decrease in overcrowding in many districts.

Chart 9: Capacity of auxiliary buildings used for elementary schools by district (1989 and 2001). This table shows that the capacity of auxiliary buildings has become quite significant in many of the districts that have had the largest increases in enrollment.

Table 10: Capacity of all elementary schools (main and auxiliary) buildings by district (1989 and 2001). This table shows that the capacity of main and elementary school buildings has increased in 26 districts, and decreased in 6 others. Some districts such as 10 and 24 have had enormous increases in total capacity.

Chart 10A: Total capacity of all elementary schools (main and auxiliary) buildings by district (1989 and 2001). This chart illustrate the wide increase in capacity of the last 12 years.

Chart 10B: Changes in capacity of all elementary schools (main and auxiliary) buildings by district (1989 and 2001)

Chart 10C: Percentage change in capacity of all elementary schools (main and auxiliary) buildings by district (1989 and 2001). These two charts (B and C) illustrate the across-the-board increase in capacity. Districts 6, 10, and 24 stand out for having the largest increases in capacity, while Districts 4, 7, and 23 stand out for relatively large decreases.

Table 11: Changes in the number and type of elementary school buildings by district (1989 to 2001). This table and the charts that follow show the moderate increase in the number of elementary school buildings across, and the large increase in the number of auxiliary buildings.

Chart 11A: Change in number of elementary school main buildings by district (1989 to 2001). Districts 6, 9, 10, and 13 stand out for having the largest increases, and five districts stand out for actually having a decrease in the number of schools.

Chart 11B: Change in number of overcrowded main elementary school buildings. This table shows that there has been a substantial change in the location of overcrowding. Fifteen districts have less overcrowded schools than in 1989 and 14 districts have more.

Chart 11C: Change in number of severely overcrowded main elementary school buildings. The decrease in the number of severely overcrowded schools is apparent, but four districts stand out for having had an increase in the number of severely overcrowded schools, and so are in need of additional schools.

Chart 11D: Change in number of elementary school auxiliary buildings by district (1989 to 2001). The nearly across-the-board growth of auxiliary buildings is evident from this chart.

Table 12: Elementary school students in auxiliary buildings by district (1989-2001). Although the number of students in auxiliary buildings remains relatively small the increasing reliance on these alternative building types is very apparent from this table and chart.

Chart 12: Elementary school students in auxiliary buildings by district (1989-2001)

Table 13: Capacity of elementary school auxiliary buildings by district (1989 and 2001). The increasing reliance on auxiliary buildings is also apparent from this table and chart—especially in districts like 10 and 24, which have had a large increase in enrollment.

Chart 13: Capacity of elementary school auxiliary buildings by district (1989 and 2001)

Table 14: Elementary school enrollment by district (1989 and 2001) This table shows that there has been a large increase in elementary school enrollment over the last 12 years (68,644 students or more than 14%), but this increase has not been evenly spread throughout the city. Twenty-three districts have had increases in enrollment, but nine districts have actually had decreases. District 24 has had the largest increase in enrollment (nearly 55%), and District 13 has had the largest decrease in enrollment (nearly 15%).

Chart 14A: Elementary school enrollment by district, 1989 and 2001. This table shows enrollment in both years. Although there is a great difference in the changes in enrollment across districts, the general pattern of enrollment has changed somewhat less.

Chart 14B: Change in elementary school enrollment 1989 to 2001. This chart makes the variation in the changes in enrollment more apparent. Sixteen of the 32 districts have had enrollment increases of 2,000 students or more, while some of the rest of the districts have experienced stagnant or declining enrollment.

Chart 14C: Percentage change in elementary school enrollment 1989 to 2001. A similar pattern emerges in this chart. District 24 stands out in both charts, with an increase of more than 9,000 students (almost 55%). Fortunately, capacity has largely been able to keep pace with increasing enrollment in District 24 and it has not had one of the largest increases in overcrowding (see chart 6A).

Table 15: The causes of the change in the overload of elementary schools (1989 and 2001). This table breaks down the changes in the net overload (or underload) into its component parts. The change in the net overload equals the change in enrollment minus the change in capacity. That is, column A equals column B minus column C. For the overload to decrease, either capacity must increase or enrollment must fall. The change in capacity equals the change in capacity of main buildings plus the change in capacity of adjunct buildings. That is, column C equals column D plus column E. For total capacity to increase, either the capacity of main buildings or the capacity of adjunct buildings must increase. Capacity has increased by 76,140 students, and enrollment has also increased by 68,644 students—leaving a net decrease in the underload of only 7,140 students. Notice that more than 16,000 of the new seats created have been in adjunct buildings. Therefore, if it were not for the increase in the number of adjunct buildings, capacity would have declined in the last 12 years. It is also apparent that decreases in overcrowding in several districts are at least partially attributable to decreasing enrollment. Districts 1, 4, 7, 13, 14, 16, 17, 19, and 32 have all experienced decreases in enrollment.

Chart 15: Changes in enrollment and capacity in elementary schools, 1989 to 2001. This chart shows that in most districts increases in capacity have just barely kept pace

with increasing enrollment. Only a few districts, such as 9, 10, 15, and 17, stand out as having had a significantly larger increase in capacity than enrollment. Districts such as 20 and 31 have had their increases in capacity swamped by much larger increases in enrollment. But the experience of Districts 6 and 24 is more typical where increases in capacity were almost evenly matched by increases in enrollment. Capacity keeping pace with enrollment would be a good thing if the capacity was adequate at the beginning, but as has been shown above, there was significant overcrowding in 1989. Thus, all the construction of the last 10 years has served to keep overcrowding from getting any worse, but it has not been enough to reduce overcrowding. (NOTE: there has been some success at relieving severe overcrowding—see Table 5.)

Table 16: Students in overcrowded middle schools by district (2001) and gross excess capacity in middle schools. This table and the accompanying chart show that although middle schools are substantially less overcrowded than in elementary schools, some districts have large numbers of students in overcrowded middle schools. The number of elementary schools is surprising in comparison to the gross excess capacity. Nearly every school district has at least some middle schools with excess capacity. Yet it is clear that there is much less overcrowding than in elementary schools.

Chart 16: Students in overcrowded middle schools by district (2001). Sixteen districts have some overcrowded middle schools, and ten of those have more than 4,000 students in overcrowded schools.

Table 17: Is relocation a solution to severe overcrowding? Middle schools with significant excess capacity (less than 80% utilization) compared to elementary schools with severe overcrowding (more than 125% utilization), 2001. This table and the two accompanying charts, examine the possibility that some overcrowding could be relieved by moving elementary school students to middle schools where more excess capacity is available. Seventeen districts have some severely overcrowded elementary schools. Overcrowding in twelve of those districts could be at least partially reduced by relocation of elementary students, and overcrowding could be eliminated in ten of those districts. Before students could be moved, several questions would have to be answered: Are the middle schools close enough to the elementary schools to make redistribution viable? Which elementary grades should be moved into middle schools? Does the configuration of middle schools lend itself to adaptation? How much would it cost to adapt these schools? Are current patterns of enrollment likely to persist long enough to make this strategy worthwhile? More study will need to be done to see whether these buildings can be adapted to handle elementary school classes, but the potential of this strategy makes this study worthwhile. Relocation could be a simple low-cost way to reduce severe overcrowding and overcrowding in general. This table examines moving students in fourth, fifth, or sixth grade—students that require the same amount of space as middle school students. However, it may be desirable to move younger students. This possibility is examined in table 18 below.

Chart 17A: Is relocation a solution to severe overcrowding? This chart shows the excess capacity in middle schools with less than 80% utilization rates compared to the overload in severely overcrowded elementary schools (with utilization rates over 125%). It is apparent that overall the excess capacity is larger than the overload.

Chart 17B: Is relocation a solution to severe overcrowding? This chart shows the overload in elementary schools before and after this hypothetical redistribution of pupils.

The white bar shows the overload before this hypothetical redistribution, and the black line shows the overload after redistribution. Only seven districts have black bars, meaning that only seven districts would have any severe overcrowding if this redistribution could be implemented. In four districts the black bar is just as large as the white bar showing that this kind of redistribution could not relieve overcrowding in these districts.

Table 18: Relocation of younger grades. Some experience shows that it is better to combine younger grades (kindergarten through third) with middle school students rather than older grades that are closer in age to middle school students. However, according to the BOE, a classroom that can accommodate 31 students in fourth to eighth grade can only accommodate 25 students in kindergarten through third. Taking this into account reduces the potential for relocation. It would also involve a greater restructuring of schools, but as Table 18 shows, there almost as much capacity for a substantial reduction in overcrowding by moving lower grades into middle schools as there is by moving higher grades into middle schools.

Table 1: Overcrowding in all elementary and middle schools, 1989 and 2001, includes main and auxiliary buildings

	1989	2001	Change	Percentage Change
Total enrollment	655,793	769,607	113,814	17.36%
Students in overcrowded schools	299,061	342,638	43,577	14.57%
Students in severely overcrowded schools	104,926	90,189	-14,737	-14.04%

Source: EPP calculations from data in the New York City Board of Education School Facilities Enrollment - Capacity - Utilization, 1988-1989 and 2000-2001

Table 1A: Overcrowding in all elementary schools, 1989 and 2001, includes main and auxiliary buildings

	1989	2001	Change	Percentage Change
Total enrollment	465,258	514,887	49,629	10.67%
Students in overcrowded schools (A+B)	256,837	267,406	10,569	4.12%
A: Students in overcrowded main buildings	247,994	243,271	-4,723	-1.90%
B: Students in overcrowded auxiliary buildings	8,843	24,135	15,292	172.93%
Students in severely overcrowded schools (C+D)	75,670	46,361	-29,309	-38.73%
C: Students in severly overcrowded main buildings	72,914	36,221	-36,693	-50.32%
D: Students in severly overcrowded auxiliary buildings	2,756	10,140	7,384	267.92%

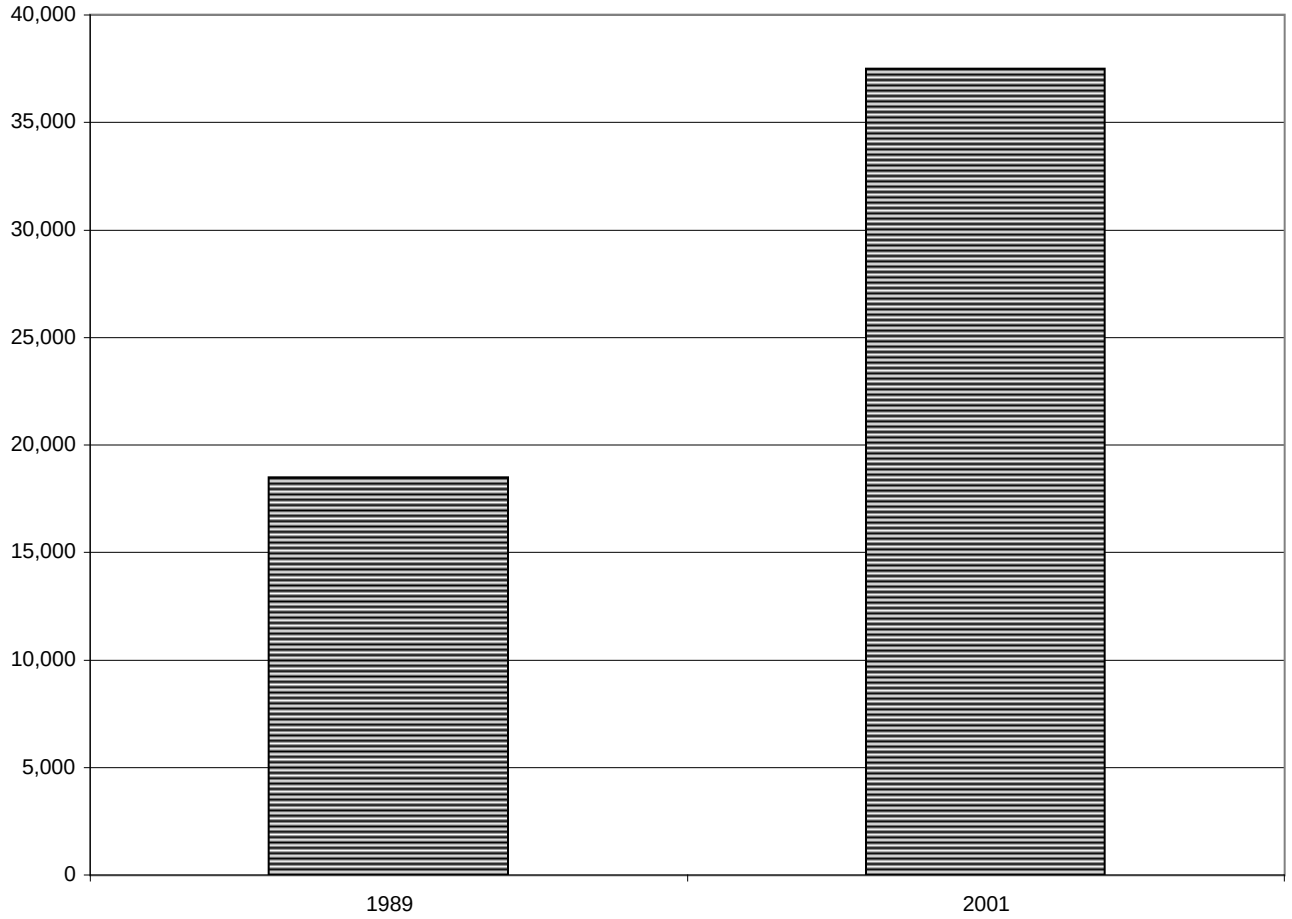
Source: EPP calculations from data in the New York City Board of Education School Facilities Enrollment - Capacity - Utilization, 1988-1989 and 2000-2001

Table 2: Overcrowding in elementary school buildings, 1989 and 2001

	1989	2001	Change	Percentage Change
Total enrollment (all buildings)	483,745	552,389	68,644	14.19%
Students in main buildings	465,258	514,887	49,629	10.67%
Students in all auxiliary buildings (A+B)	18,487	37,502	19,015	102.86%
A: Students in TCUs	0	15,817	15,817	undefined
B: Students in other auxiliary buildings	18,487	21,685	3,198	17.30%
Students in overcrowded main buildings	247,994	243,271	-4,723	-1.90%
Students in overcrowded auxiliary buildings	8,843	24,135	15,292	172.93%
Students in all overcrowded buildings	256,837	267,406	10,569	4.12%

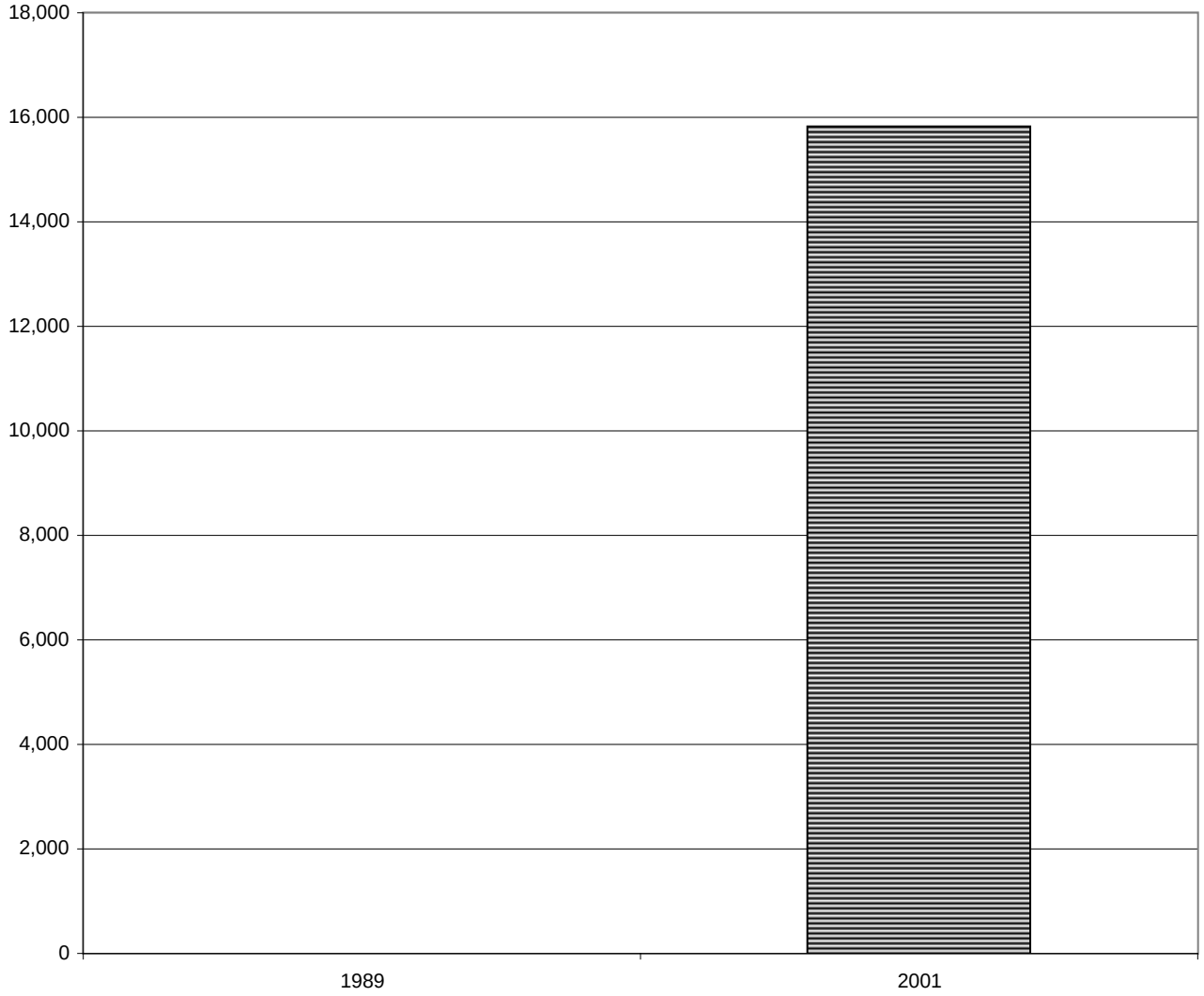
Source: EPP calculations from data in the New York City Board of Education School Facilities Enrollment - Capacity - Utilization, 1988-1989 and 2000-2001

Chart 2A: Elementary school students in auxiliary buildings, 1989 and 2001



Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment - Capacity - Utilization, 1988-1989 and 2000-2001

Chart 2B: Students in TCUs, 1989 and 2001



Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment - Capacity - Utilization, 1988-1989 and 2000-2001

Table 3: Changes in enrollment, capacity, and net overload in New York City elementary schools, all buildings (main and auxiliary), 1989 and 2001

	1989	2001	Change	Percentage Change
Total enrollment	483,745	552,389	68,644	14.19%
Total capacity	501,001	577,141	76,140	15.20%
Net overload (-excess capacity)	-17,256	-24,752	-7,496	43.44%

Table 3A: Elementary school main classroom buildings only

	1989	2001	Change	Percentage Change
Total enrollment	483,745	552,389	68,644	14.19%
Total capacity	482,035	541,510	59,475	12.34%
Net overload (-excess capacity)	-1,710	-10,879	-9,169	536.20%

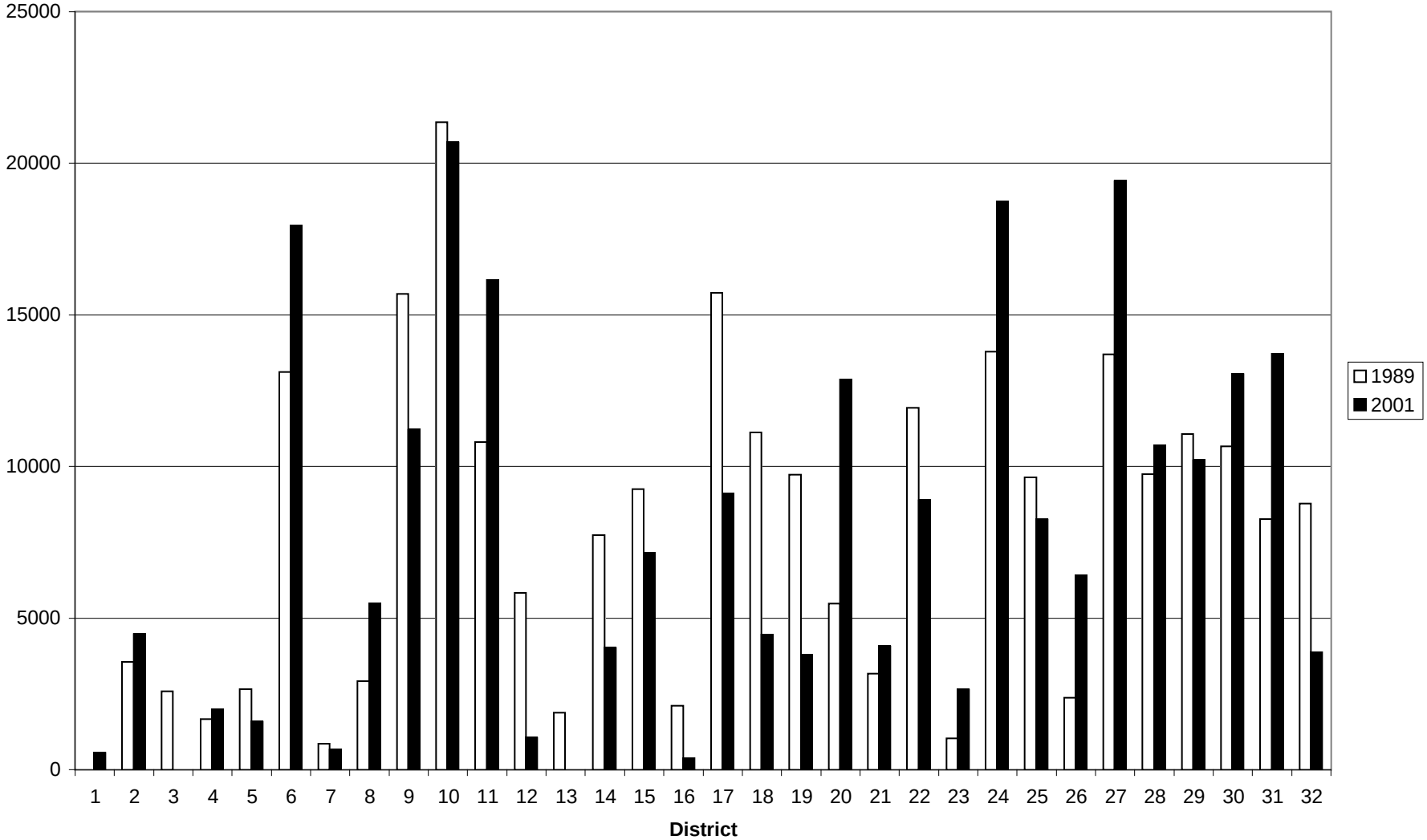
Source: EPP calculations from data in the New York City Board of Education School Facilities Enrollment - Capacity - Utilization, 1988-1989 and 2000-2001

Table 4: Students in overcrowded elementary schools (main buildings only)

District	1989	2001	Change	Percentage Change
1	0	542	542	undefined
2	3,540	4,471	931	26.30%
3	2,570	0	-2,570	-100.00%
4	1,655	1,983	328	19.82%
5	2,649	1,571	-1,078	-40.69%
6	13,114	17,939	4,825	36.79%
7	853	655	-198	-23.21%
8	2,919	5,473	2,554	87.50%
9	15,687	11,207	-4,480	-28.56%
10	21,345	20,685	-660	-3.09%
11	10,789	16,150	5,361	49.69%
12	5,830	1,046	-4,784	-82.06%
13	1,870	0	-1,870	-100.00%
14	7,721	4,011	-3,710	-48.05%
15	9,242	7,149	-2,093	-22.65%
16	2,103	370	-1,733	-82.41%
17	15,720	9,081	-6,639	-42.23%
18	11,111	4,451	-6,660	-59.94%
19	9,725	3,772	-5,953	-61.22%
20	5,474	12,858	7,384	134.89%
21	3,154	4,055	901	28.57%
22	11,932	8,883	-3,049	-25.55%
23	1,025	2,620	1,595	155.62%
24	13,785	18,744	4,959	35.98%
25	9,628	8,244	-1,384	-14.37%
26	2,356	6,396	4,040	171.48%
27	13,693	19,409	5,716	41.74%
28	9,743	10,698	955	9.80%
29	11,069	10,198	-871	-7.87%
30	10,665	13,034	2,369	22.21%
31	8,254	13,705	5,451	66.04%
32	8,773	3,871	-4,902	-55.88%
Totals	247,994	243,271	-4,723	-1.90%

Source: EPP calculations from data in the New York City Board of Education School Facilities Enrollment - Capacity - Utilization, 1988-1989 and 2000-2001

Chart 4A: Students in overcrowded elementary schools (main buildings only) 1989-2001



Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment-Capacity-Utilization, 1988-1989 and 2000-2001

Table 5: Students in severely overcrowded elementary school main buildings, 1989 and 2001 (125% of utilization or more)

District	1989	2001	Change	Percentage Change
1	0	0	0	no change
2	0	0	0	no change
3	0	0	0	no change
4	0	0	0	no change
5	0	0	0	no change
6	7,242	1,061	-6,181	-85.35%
7	853	0	-853	-100.00%
8	0	0	0	no change
9	3,657	1,610	-2,047	-55.97%
10	15,470	2,643	-12,827	-82.92%
11	2,426	4,774	2,348	96.78%
12	1,610	0	-1,610	-100.00%
13	0	0	0	no change
14	229	183	-46	-20.09%
15	3,355	553	-2,802	-83.52%
16	0	370	370	undefined
17	6,106	2,759	-3,347	-54.81%
18	2,722	0	-2,722	-100.00%
19	2,272	356	-1,916	-84.33%
20	0	2,257	2,257	undefined
21	0	0	0	no change
22	2,735	0	-2,735	-100.00%
23	0	0	0	no change
24	8,477	8,005	-472	-5.57%
25	784	0	-784	-100.00%
26	532	398	-134	-25.19%
27	4,620	8,281	3,661	79.24%
28	2,467	417	-2,050	-83.10%
29	1,750	0	-1,750	-100.00%
30	3,364	1,410	-1,954	-58.09%
31	837	453	-384	-45.88%
32	1,406	691	-715	-50.85%
Totals	72,914	36,221	-36,693	-50.32%

Source: EPP calculations from data in the New York City Board of Education School Facilities Enrollment - Capacity - Utilization, 1988-1989 and 2000-2001

Chart 5A: Elementary school students in severely overcrowded schools (main buildings only), 1989 and 2001

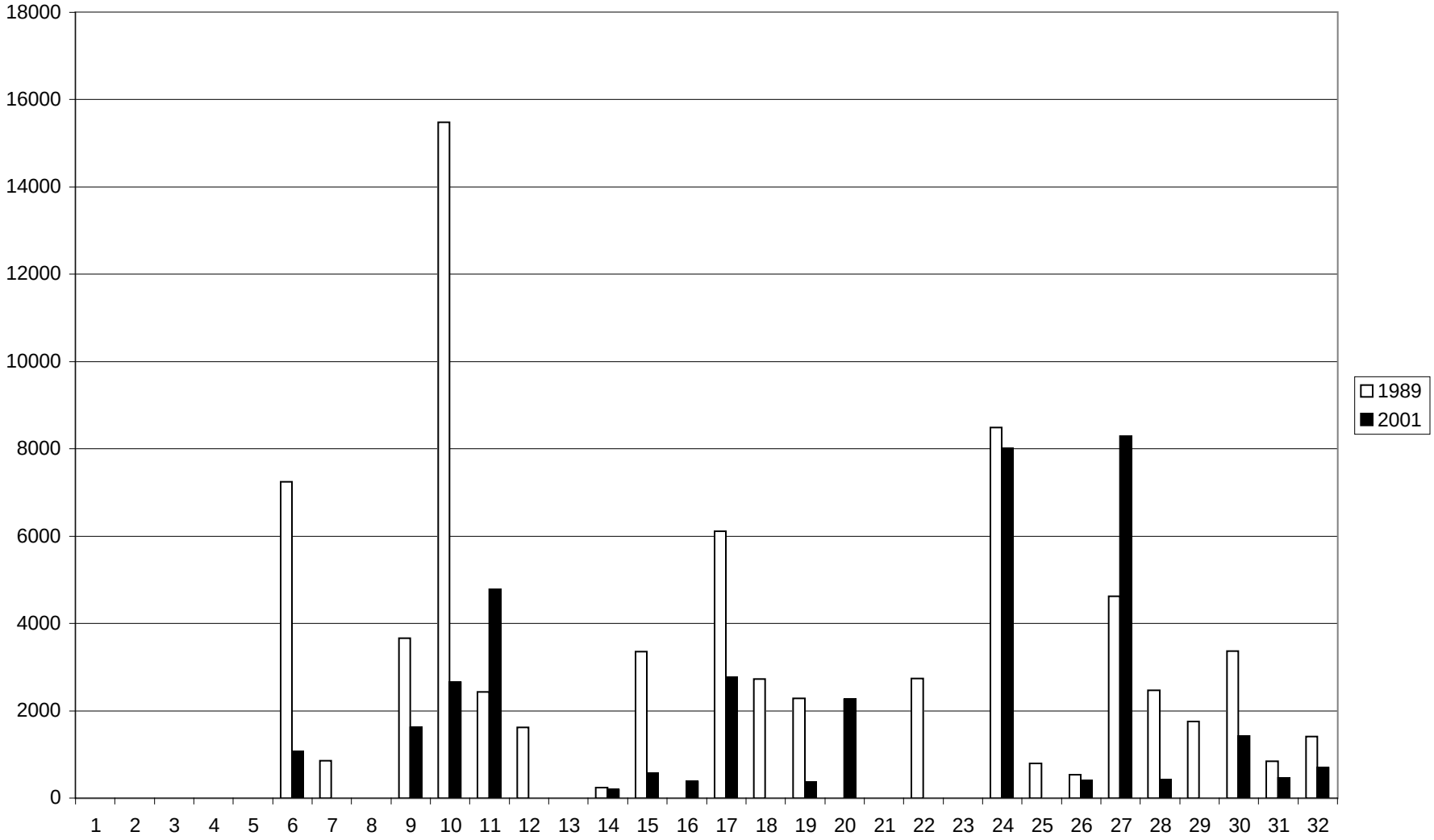


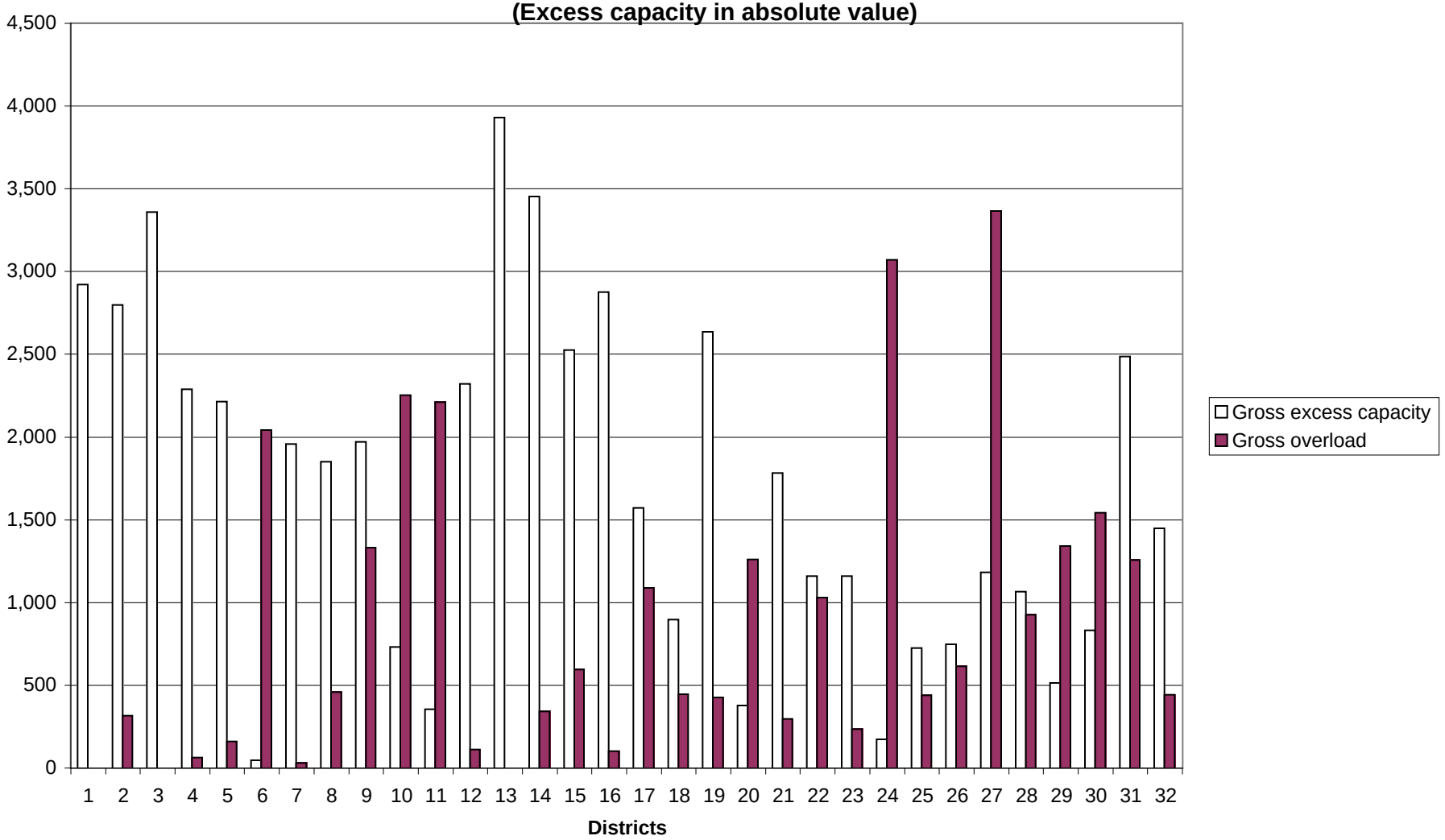
Table 6: Gross and net overload and excess capacity in main elementary school buildings by district, 2001

District	Gross excess capacity (underload)	Gross overload	Net overload / excess capacity (gross overload minus gross excess capacity)	New Schools Needed to relieve gross overload	New Schools Needed to relieve net overload
1	-2,920	1	-2,919	0	0
2	-2,798	315	-2,483	1	0
3	-3,358	0	-3,358	0	0
4	-2,286	62	-2,224	0	0
5	-2,214	158	-2,056	1	0
6	-46	2,041	**1,995**	4	4
7	-1,955	28	-1,927	0	0
8	-1,849	459	-1,390	1	0
9	-1,970	1,330	-640	2	0
10	-730	2,253	**1,523**	4	3
11	-355	2,211	**1,856**	4	3
12	-2,320	109	-2,211	0	0
13	-3,928	0	-3,928	0	0
14	-3,453	340	-3,113	1	0
15	-2,525	594	-1,931	1	0
16	-2,874	100	-2,774	0	0
17	-1,569	1,088	-481	2	0
18	-895	444	-451	1	0
19	-2,633	426	-2,207	1	0
20	-377	1,258	**881**	2	2
21	-1,780	295	-1,485	1	0
22	-1,157	1,030	-127	2	0
23	-1,157	232	-925	1	0
24	-171	3,070	**2,899**	5	5
25	-725	437	-288	1	0
26	-745	613	-132	1	0
27	-1,182	3,363	**2,181**	6	4
28	-1,063	926	-137	2	0
29	-511	1,340	**829**	2	2
30	-830	1,540	**710**	3	1
31	-2,486	1,256	-1,230	3	0
32	-1,448	442	-1,006	4	0
Totals	-54,310	27,761	-26,549	56	24

Source: EPP calculations from data in the New York City Board of Education School Facilities Enrollment - Capacity - Utilization, 1988-1989 and 2000-2001

Estimates of new schools needed were created by assuming that schools would be built for at least 150 students and would genereally be built to accommodate 600 students per school.

Chart 6A: Gross excess capacity and gross overload, 2001
(Excess capacity in absolute value)



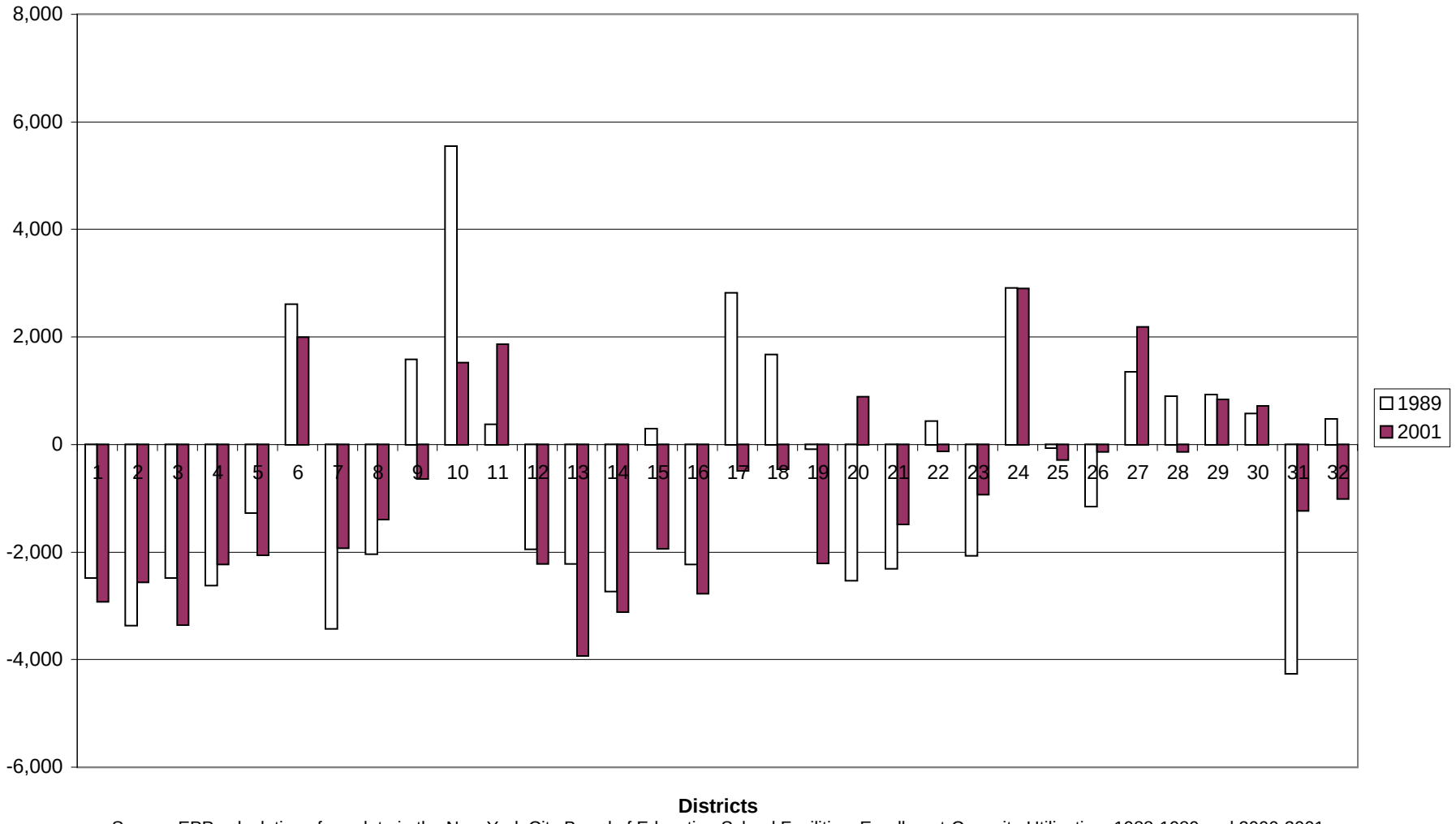
Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment-Capacity-Utilization, 1988-1989 and 2000-2001

Table 7: Change in the net overload (-underload) by district, main school buildings only, 1989 to 2001

District	1989	2001	Change	Change in number of main buildings
1	-2,473	-2,919	-446	0
2	-3,367	-2,557	810	-1
3	-2,477	-3,358	-881	2
4	-2,615	-2,224	391	1
5	-1,270	-2,056	-786	1
6	2,605	1,995	-610	8
7	-3,421	-1,927	1,494	-2
8	-2,031	-1,390	641	1
9	1,580	-640	-2,220	6
10	5,540	1,523	-4,017	12
11	374	1,856	1,482	0
12	-1,947	-2,211	-264	-1
13	-2,218	-3,928	-1,710	0
14	-2,731	-3,113	-382	0
15	289	-1,931	-2,220	2
16	-2,230	-2,774	-544	1
17	2,816	-481	-3,297	3
18	1,673	-451	-2,124	-1
19	-77	-2,207	-2,130	-1
20	-2,523	881	3,404	0
21	-2,304	-1,485	819	0
22	435	-127	-562	4
23	-2,064	-925	1,139	0
24	2,907	2,899	-8	2
25	-60	-288	-228	0
26	-1,145	-132	1,013	1
27	1,352	2,181	829	3
28	890	-137	-1,027	2
29	923	829	-94	0
30	572	710	138	3
31	-4,254	-1,230	3,024	2
32	474	-1,006	-1,480	1
Totals	-16,777	-26,623	-9,846	49

Source: EPP calculations from data in the New York City Board of Education School Facilities Enrollment - Capacity - Utilization, 1988-1989 and 2000-2001

Chart 7A: Changes in net overload (underload if negative), main school buildings only, 1989 to 2001



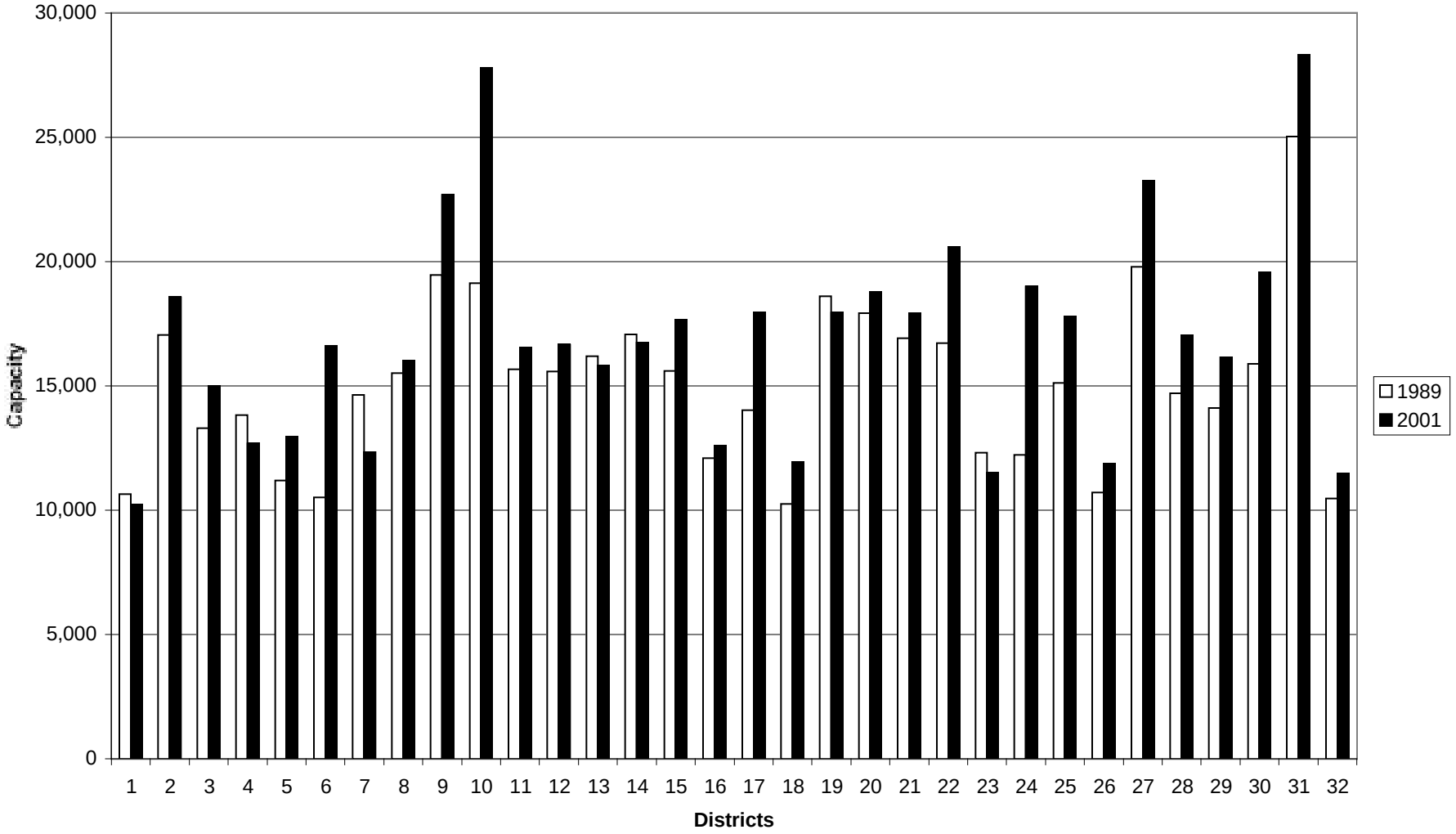
Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment-Capacity-Utilization, 1988-1989 and 2000-2001

Table 8: Capacity of main elementary school buildings

District	1989	2001	Change	Percentage change	Change in number of main buildings
1	10,637	10,214	-423	-3.98%	0
2	17,034	18,553	1,519	8.92%	-1
3	13,294	14,980	1,686	12.68%	2
4	13,823	12,665	-1,158	-8.38%	1
5	11,186	12,947	1,761	15.74%	1
6	10,509	16,604	6,095	58.00%	8
7	14,636	12,318	-2,318	-15.84%	-2
8	15,499	16,012	513	3.31%	1
9	19,461	22,672	3,211	16.50%	6
10	19,126	27,786	8,660	45.28%	12
11	15,657	16,526	869	5.55%	0
12	15,567	16,646	1,079	6.93%	-1
13	16,191	15,784	-407	-2.51%	0
14	17,066	16,740	-326	-1.91%	0
15	15,602	17,646	2,044	13.10%	2
16	12,092	12,579	487	4.03%	1
17	14,005	17,943	3,938	28.12%	3
18	10,250	11,905	1,655	16.15%	-1
19	18,601	17,931	-670	-3.60%	-1
20	17,910	18,746	836	4.67%	0
21	16,908	17,918	1,010	5.97%	0
22	16,703	20,577	3,874	23.19%	4
23	12,312	11,484	-828	-6.73%	0
24	12,225	18,986	6,761	55.30%	2
25	15,111	17,780	2,669	17.66%	0
26	10,697	11,875	1,178	11.01%	1
27	19,775	23,230	3,455	17.47%	3
28	14,687	17,022	2,335	15.90%	2
29	14,099	16,139	2,040	14.47%	0
30	15,886	19,531	3,645	22.94%	3
31	25,026	28,308	3,282	13.11%	2
32	10,460	11,463	1,003	9.59%	1
Totals	482,035	541,510	59,475	12.34%	49

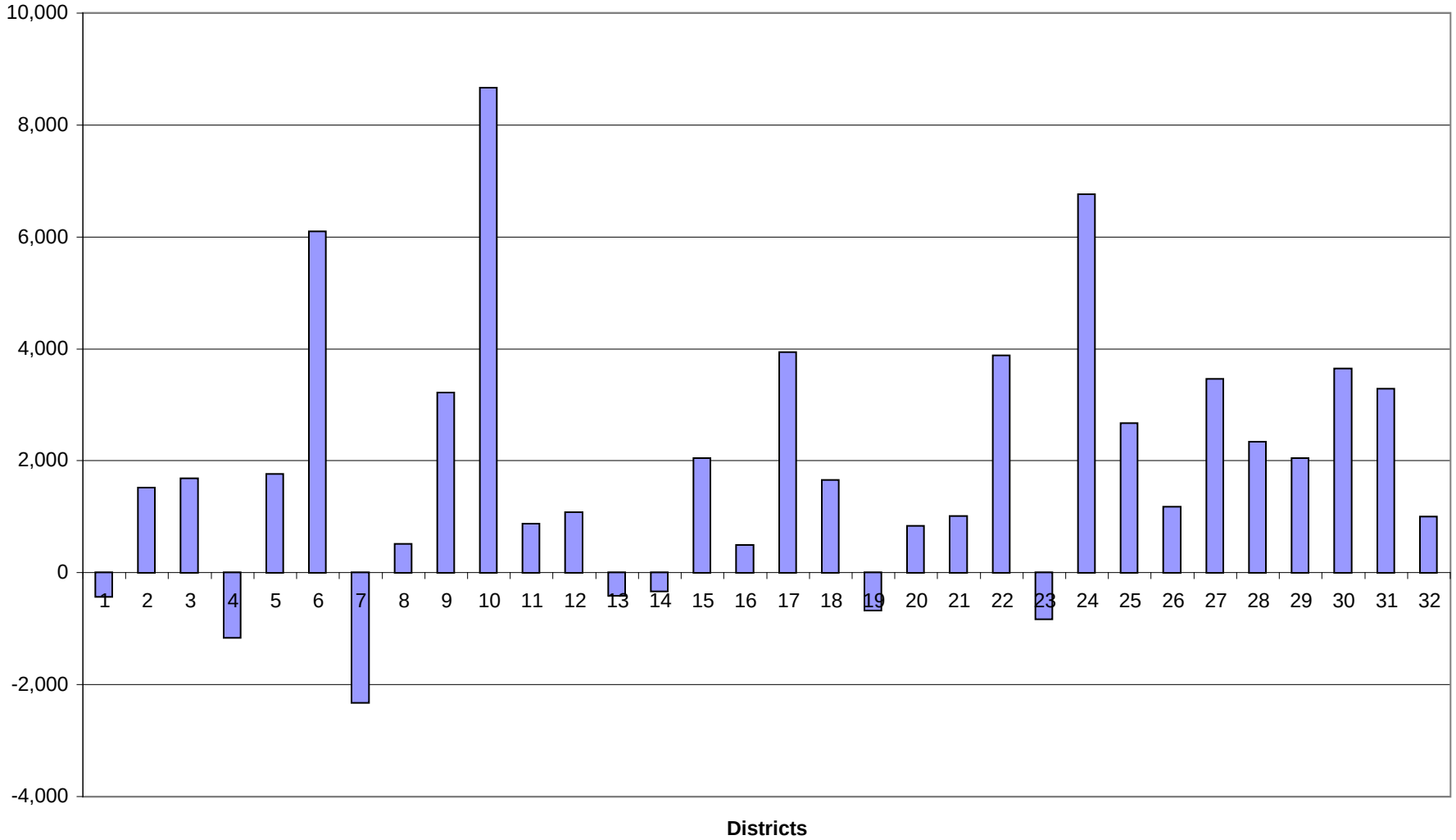
Source: EPP calculations from data in the New York City Board of Education School Facilities Enrollment - Capacity - Utilization, 1988-1989 and 2000-2001

Chart 8A: Capacity of main elementary school buildings (1989 and 2001)



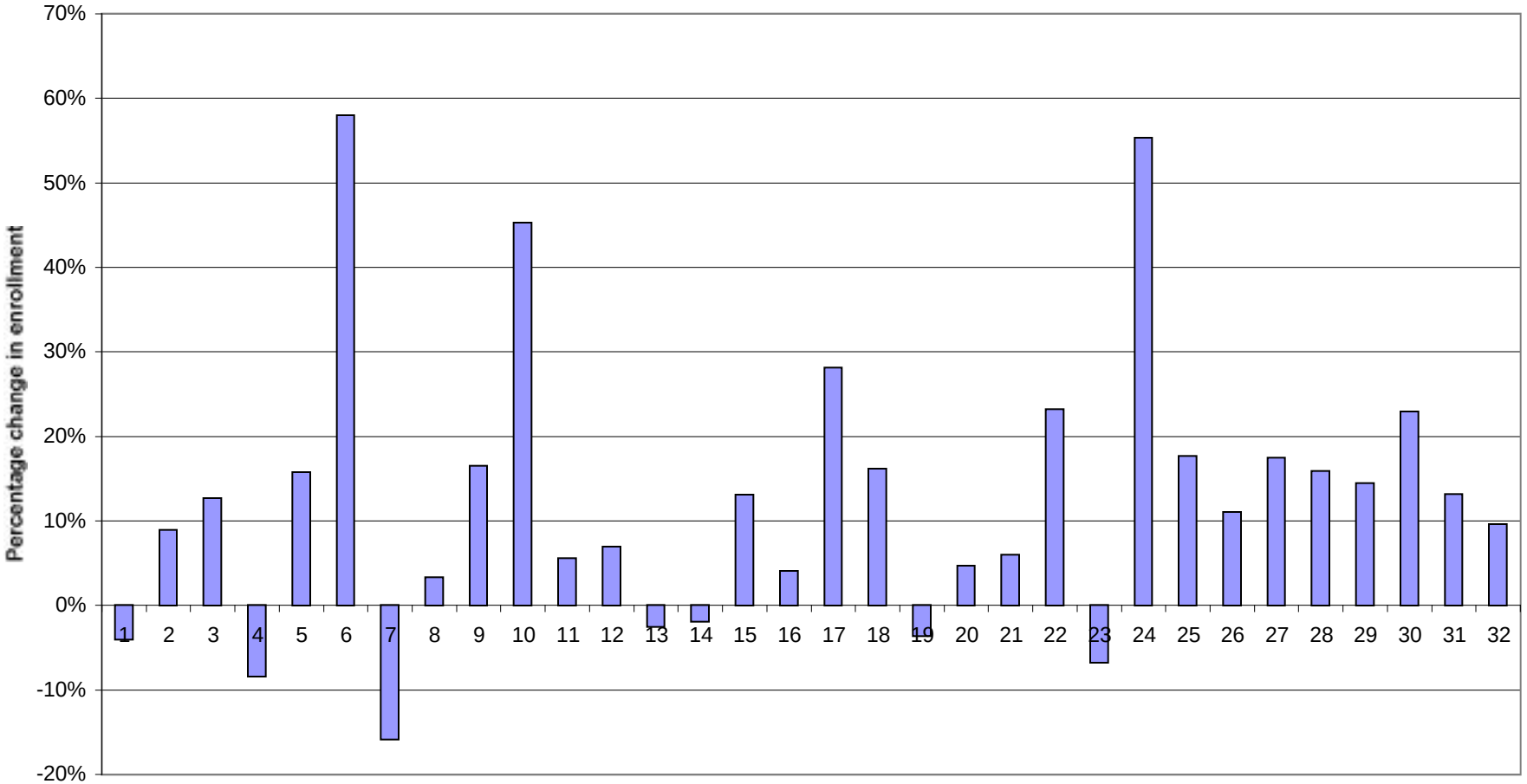
Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment-Capacity-Utilization, 1988-1989 and 2000-2001

Chart 8B: change in capacity of elementary school buildings, 1989 to 2001



Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment-Capacity-Utilization, 1988-1989 and 2000-2001

Chart 8C: The percentage change in capacity of elementary school buildings 1989 to 2001



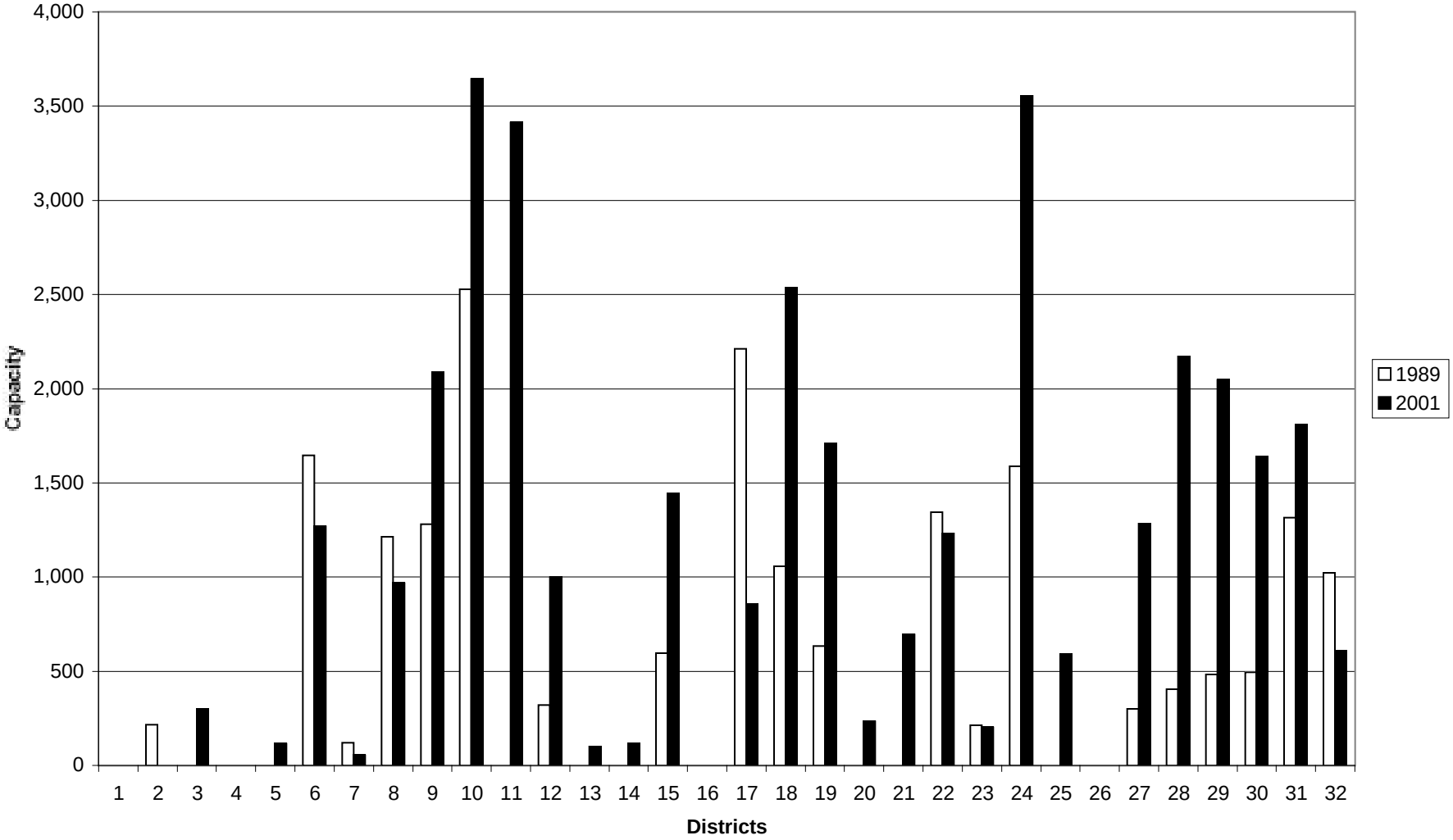
Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment-Capacity-Utilization, 1988-1989 and 2000-2001

Table 9: Capacity of auxiliary buildings used in elementary schools (minischools, annexes, and transportable classroom units)

District	1989	2001	Change	Percentage change
1	0	0	0	unchanged
2	214	0	-214	-100.00%
3	0	299	299	undefined
4	0	0	0	unchanged
5	0	112	112	undefined
6	1,644	1,268	-376	-22.87%
7	119	51	-68	-57.14%
8	1,212	967	-245	-20.21%
9	1,279	2,087	808	63.17%
10	2,526	3,644	1,118	44.26%
11	0	3,410	3,410	undefined
12	320	998	678	211.88%
13	0	99	99	undefined
14	0	112	112	undefined
15	596	1,443	847	142.11%
16	0	0	0	unchanged
17	2,210	856	-1,354	-61.27%
18	1,056	2,535	1,479	140.06%
19	632	1,705	1,073	169.78%
20	0	233	233	undefined
21	0	693	693	undefined
22	1,344	1,229	-115	-8.56%
23	213	199	-14	-6.57%
24	1,588	3,552	1,964	123.68%
25	0	589	589	undefined
26	0	0	0	unchanged
27	300	1,281	981	327.00%
28	403	2,170	1,767	438.46%
29	481	2,046	1,565	325.36%
30	494	1,639	1,145	231.78%
31	1,313	1,807	494	37.62%
32	1,022	607	-415	-40.61%
Totals	18,966	35,631	16,665	87.87%

Source: EPP calculations from data in the New York City Board of Education School Facilities Enrollment - Capacity - Utilization, 1988-1989 and 2000-2001

Chart 9A: Capacity of auxiliary buildings used for elementary schools



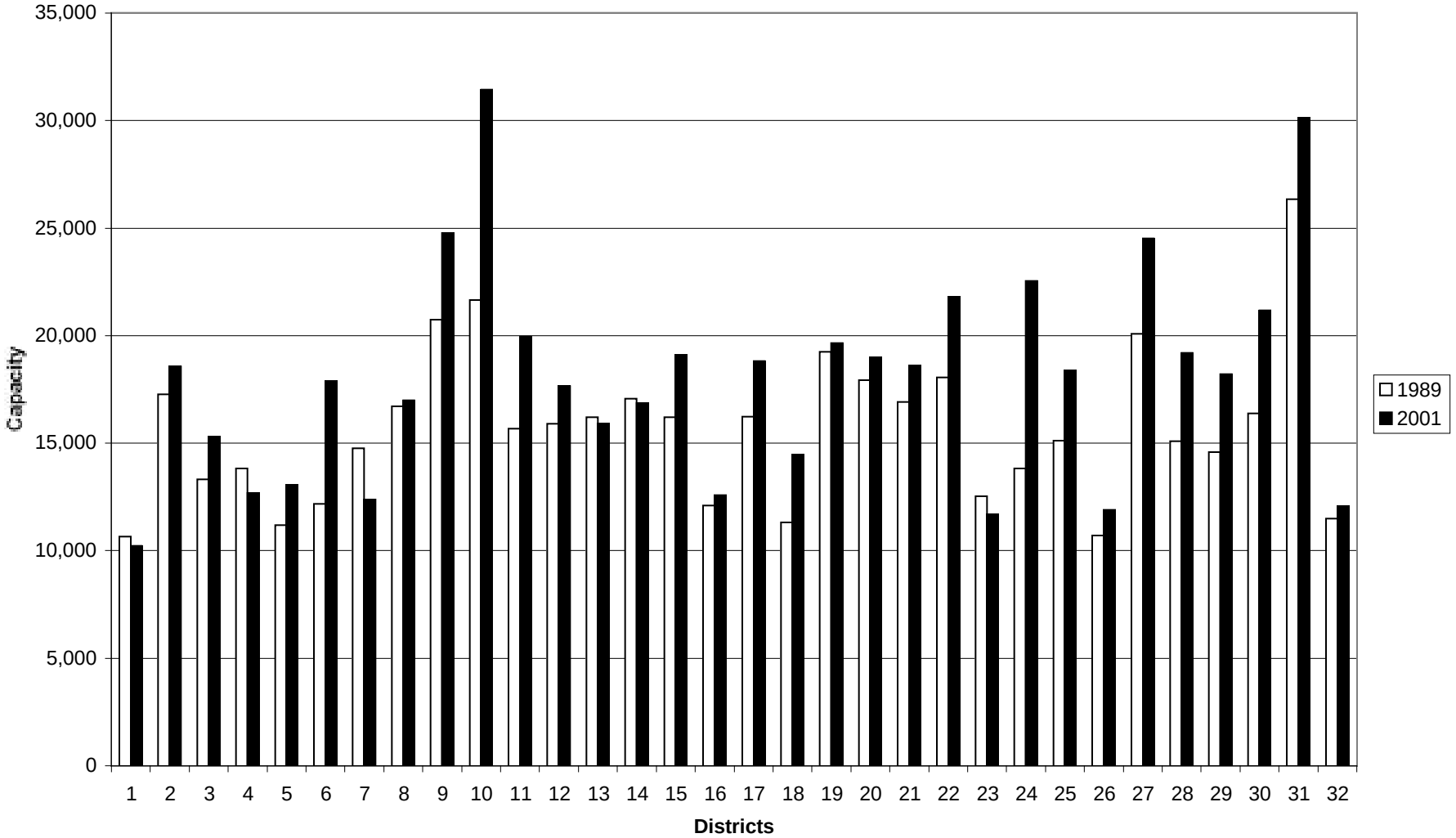
Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment-Capacity-Utilization, 1988-1989 and 2000-2001

Table 10: Total capacity in elementary schools (main and auxiliary buildings)

District	1989	2001	Change	Percentage change
1	10,637	10,214	-423	-3.98%
2	17,248	18,553	1,305	7.57%
3	13,294	15,279	1,985	14.93%
4	13,823	12,665	-1,158	-8.38%
5	11,186	13,059	1,873	16.74%
6	12,153	17,872	5,719	47.06%
7	14,755	12,369	-2,386	-16.17%
8	16,711	16,979	268	1.60%
9	20,740	24,759	4,019	19.38%
10	21,652	31,430	9,778	45.16%
11	15,657	19,936	4,279	27.33%
12	15,887	17,644	1,757	11.06%
13	16,191	15,883	-308	-1.90%
14	17,066	16,852	-214	-1.25%
15	16,198	19,089	2,891	17.85%
16	12,092	12,579	487	4.03%
17	16,215	18,799	2,584	15.94%
18	11,306	14,440	3,134	27.72%
19	19,233	19,636	403	2.10%
20	17,910	18,979	1,069	5.97%
21	16,908	18,611	1,703	10.07%
22	18,047	21,806	3,759	20.83%
23	12,525	11,683	-842	-6.72%
24	13,813	22,538	8,725	63.17%
25	15,111	18,369	3,258	21.56%
26	10,697	11,875	1,178	11.01%
27	20,075	24,511	4,436	22.10%
28	15,090	19,192	4,102	27.18%
29	14,580	18,185	3,605	24.73%
30	16,380	21,170	4,790	29.24%
31	26,339	30,115	3,776	14.34%
32	11,482	12,070	588	5.12%
Totals	501,001	577,141	76,140	15.20%

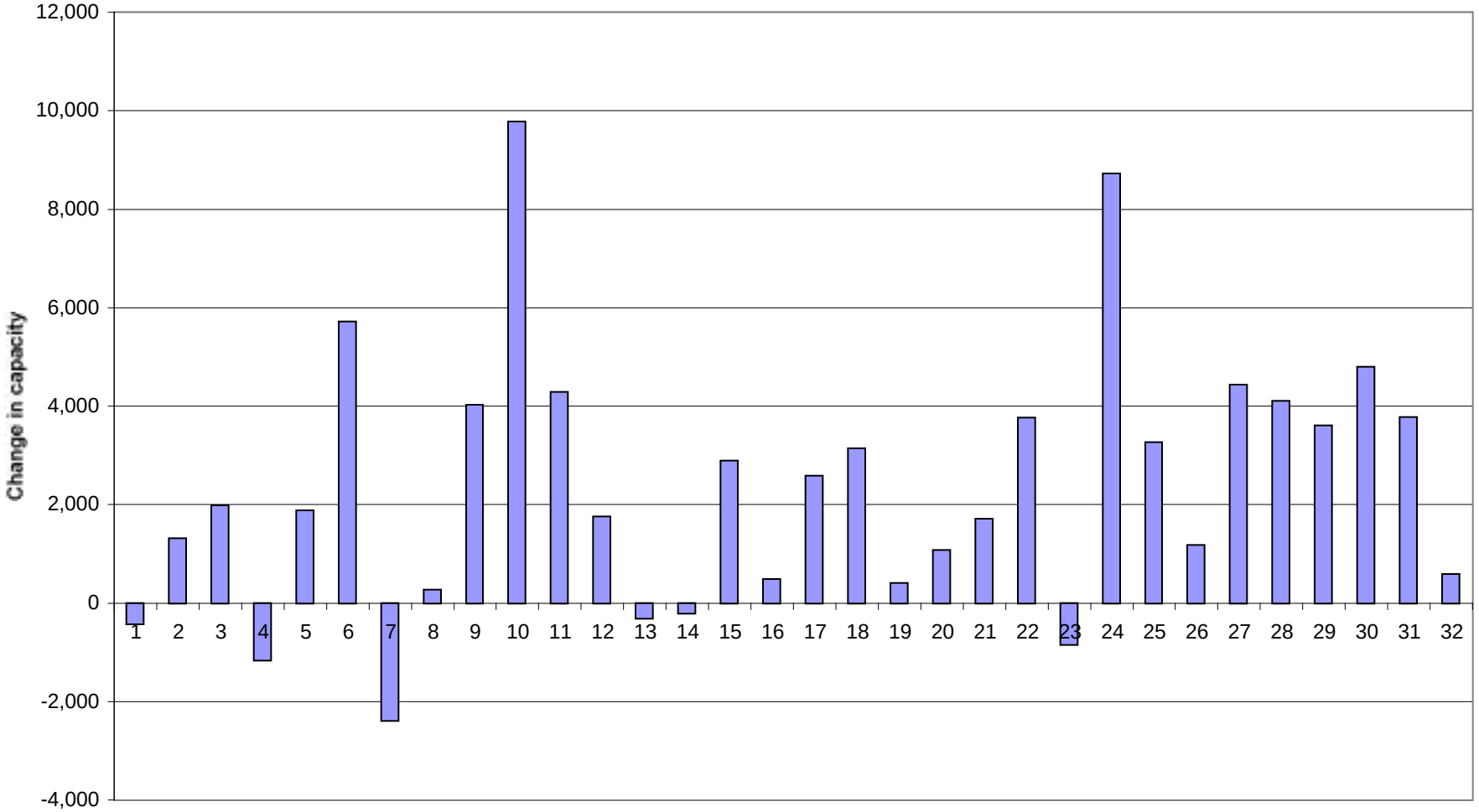
Source: EPP calculations from data in the New York City Board of Education School Facilities Enrollment - Capacity - Utilization, 1988-1989 and 2000-2001

Chart 10A: Total capacity of main and adjunct elementary school buildings



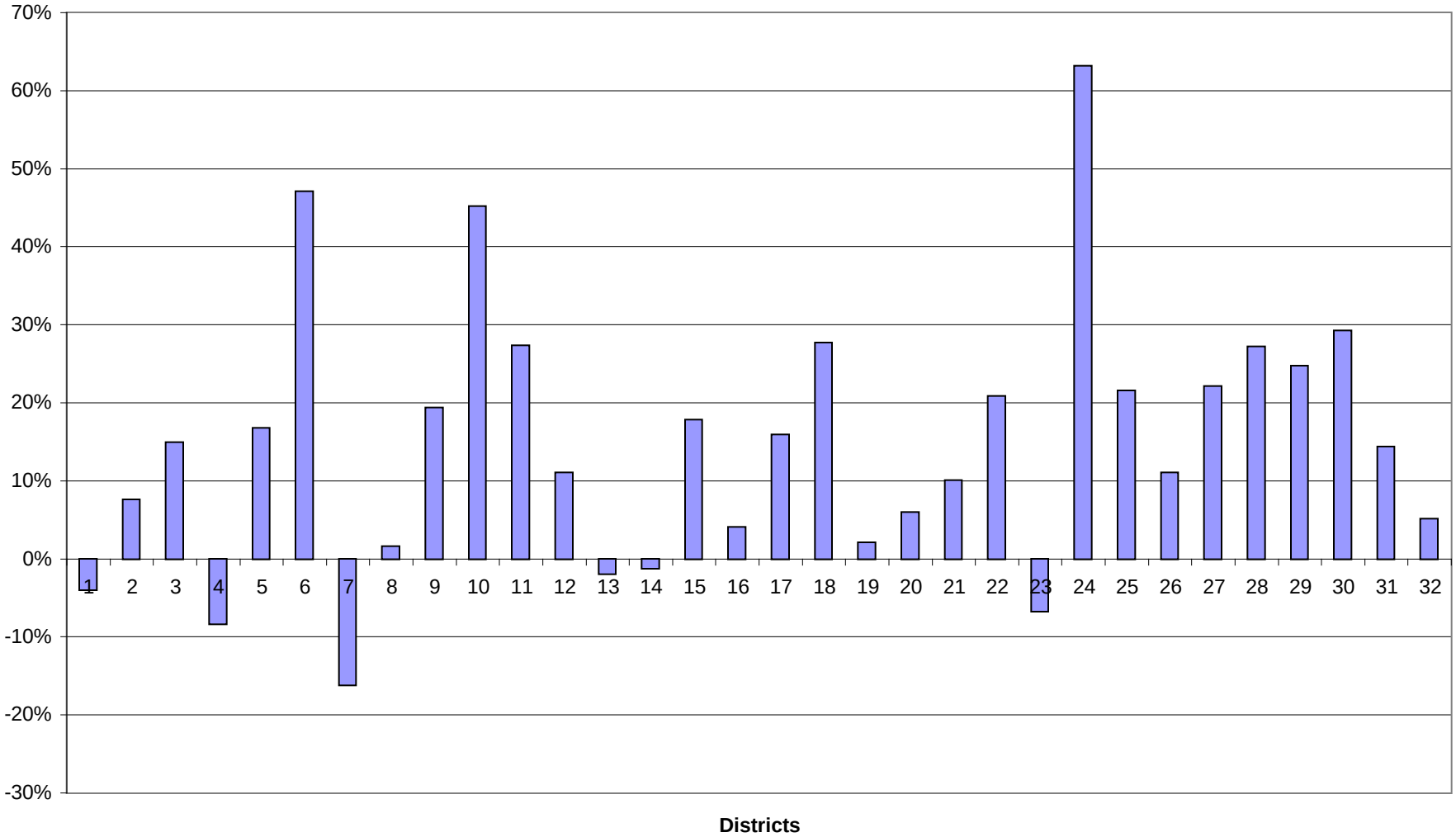
Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment-Capacity-Utilization, 1988-1989 and 2000-2001

Chart 10B: Change in total capacity of all elementary school buildings (main and auxiliary buildings) by district, 1989 to 2001



Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment-Capacity-Utilization, 1988-1989 and 2000-2001

Chart 10C: Percentage change in capacity of all elementary school buildings (main and auxiliary) buildings, 1989 to 2001



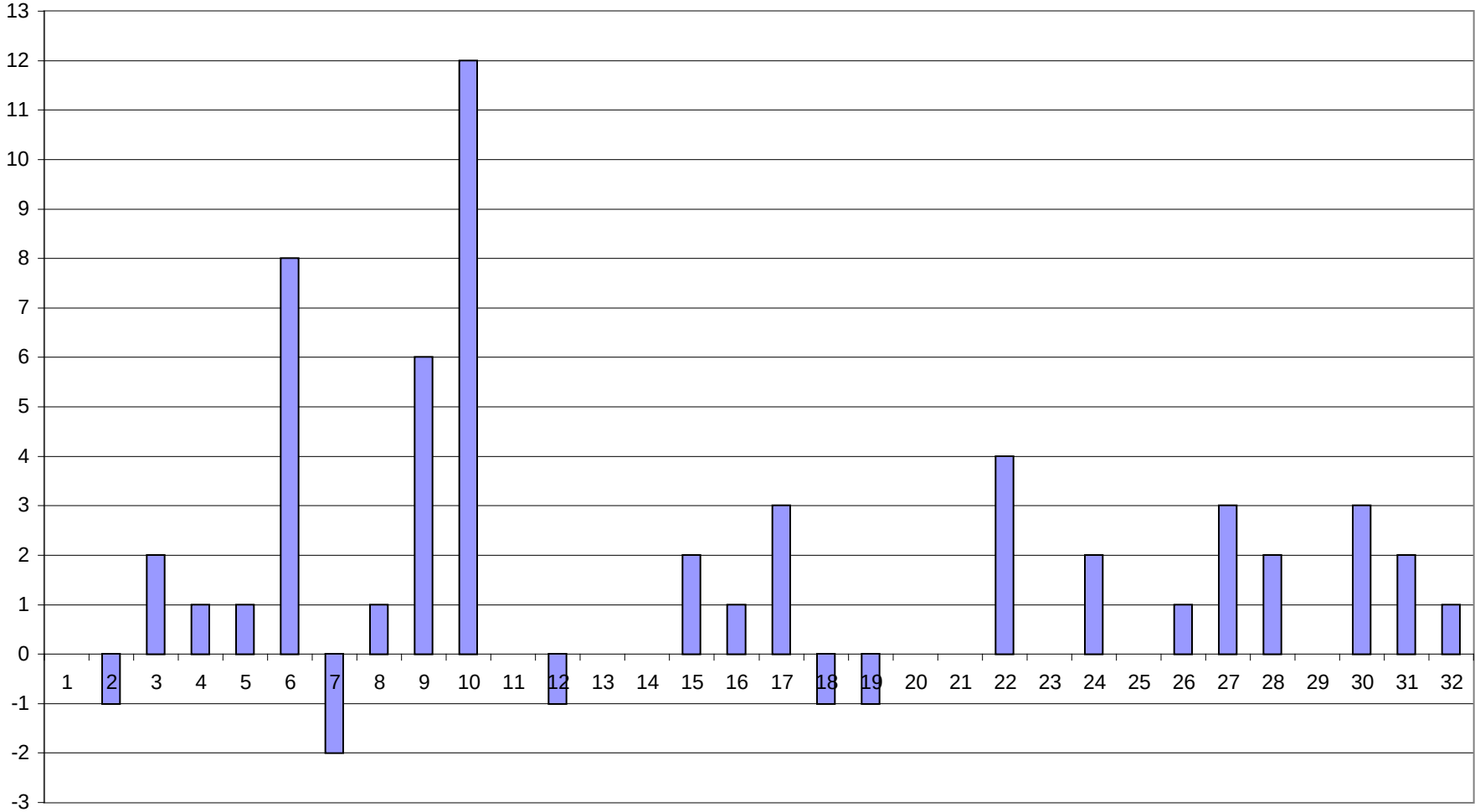
Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment-Capacity-Utilization, 1988-1989 and 2000-2001

Table 11: Changes in the number of elementary school buildings by district (1989 to 2001)

District	Change in number of main buildings	Change in number of overcrowded main bldgs.	Change in number of severely overcrowded main bldgs.	Change in number of auxiliary bldgs.
1	0	1	0	0
2	-1	1	0	-3
3	2	-3	0	2
4	1	0	0	0
5	1	-1	0	1
6	8	7	-4	-1
7	-2	0	-1	0
8	1	3	0	3
9	6	-3	-2	8
10	12	5	-10	9
11	0	5	3	15
12	-1	-4	-1	4
13	0	-2	0	1
14	0	-2	0	1
15	2	-2	-3	3
16	1	-2	1	0
17	3	-6	-3	-5
18	-1	-8	-3	9
19	-1	-5	-1	7
20	0	8	2	3
21	0	1	0	8
22	4	-4	-3	6
23	0	2	0	1
24	2	1	-2	12
25	0	-1	-1	8
26	1	7	0	0
27	3	6	4	8
28	2	3	-2	15
29	0	-4	-3	13
30	3	0	-3	8
31	2	10	0	2
32	1	-5	-1	-1
Totals	49	8	-33	137

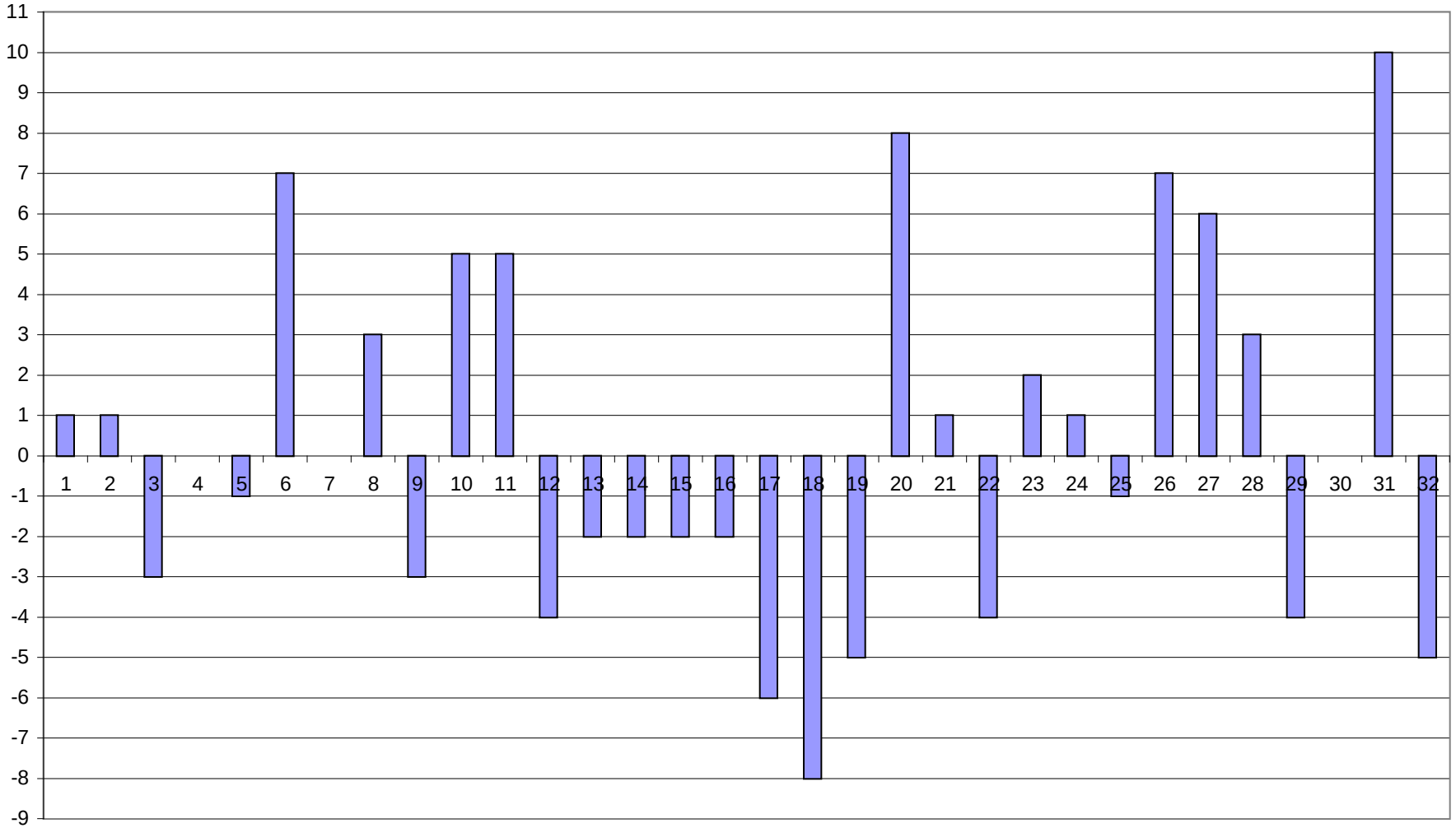
Source: EPP calculations from data in the New York City Board of Education School Facilities Enrollment - Capacity - Utilization, 1988-1989 and 2000-2001

Chart 11A: Change in number of elementary school main buildings



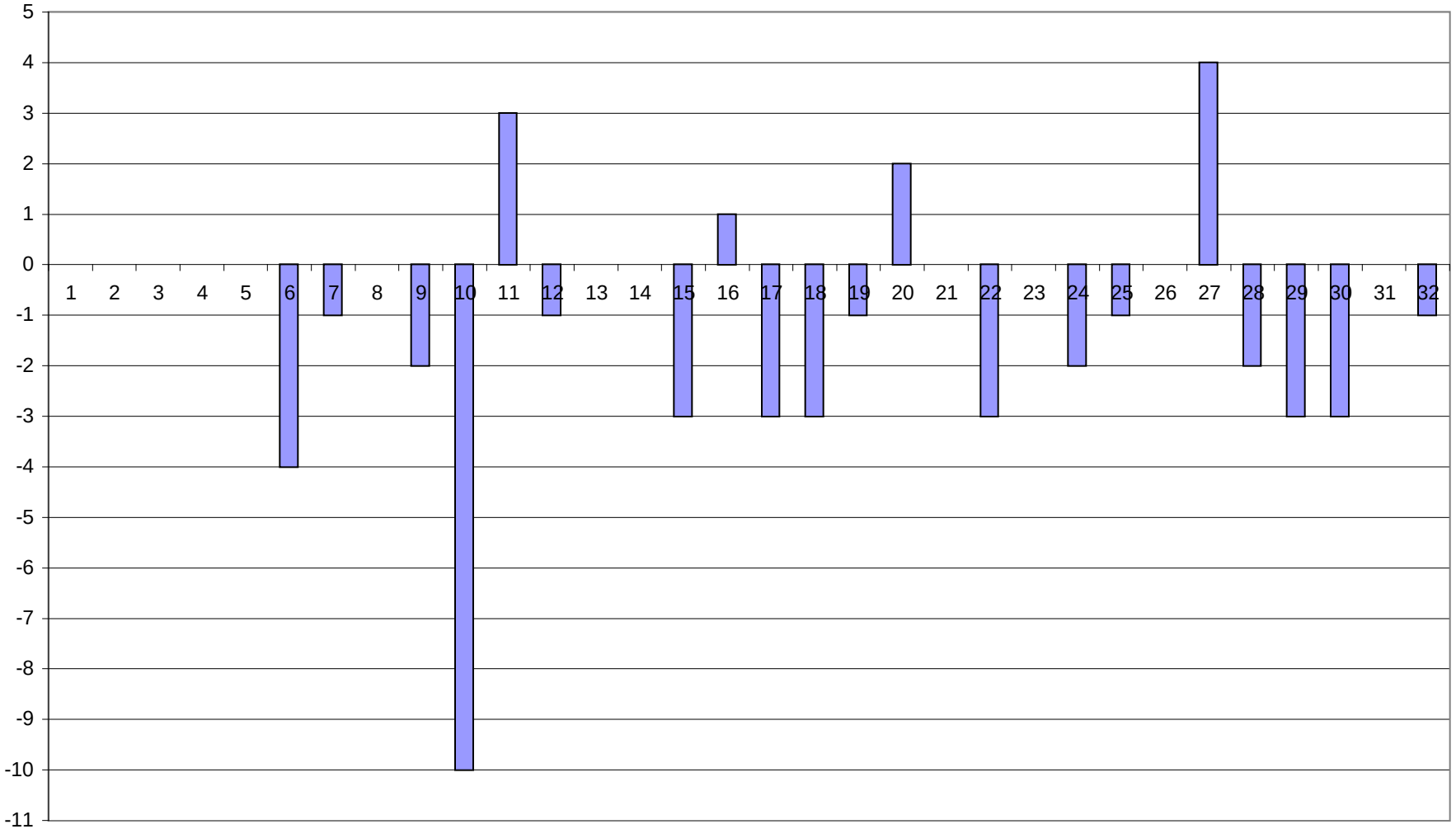
Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment-Capacity-Utilization, 1988-1989 and 2000-2001

Chart 11B: Change in number of overcrowded main elementary school buildings



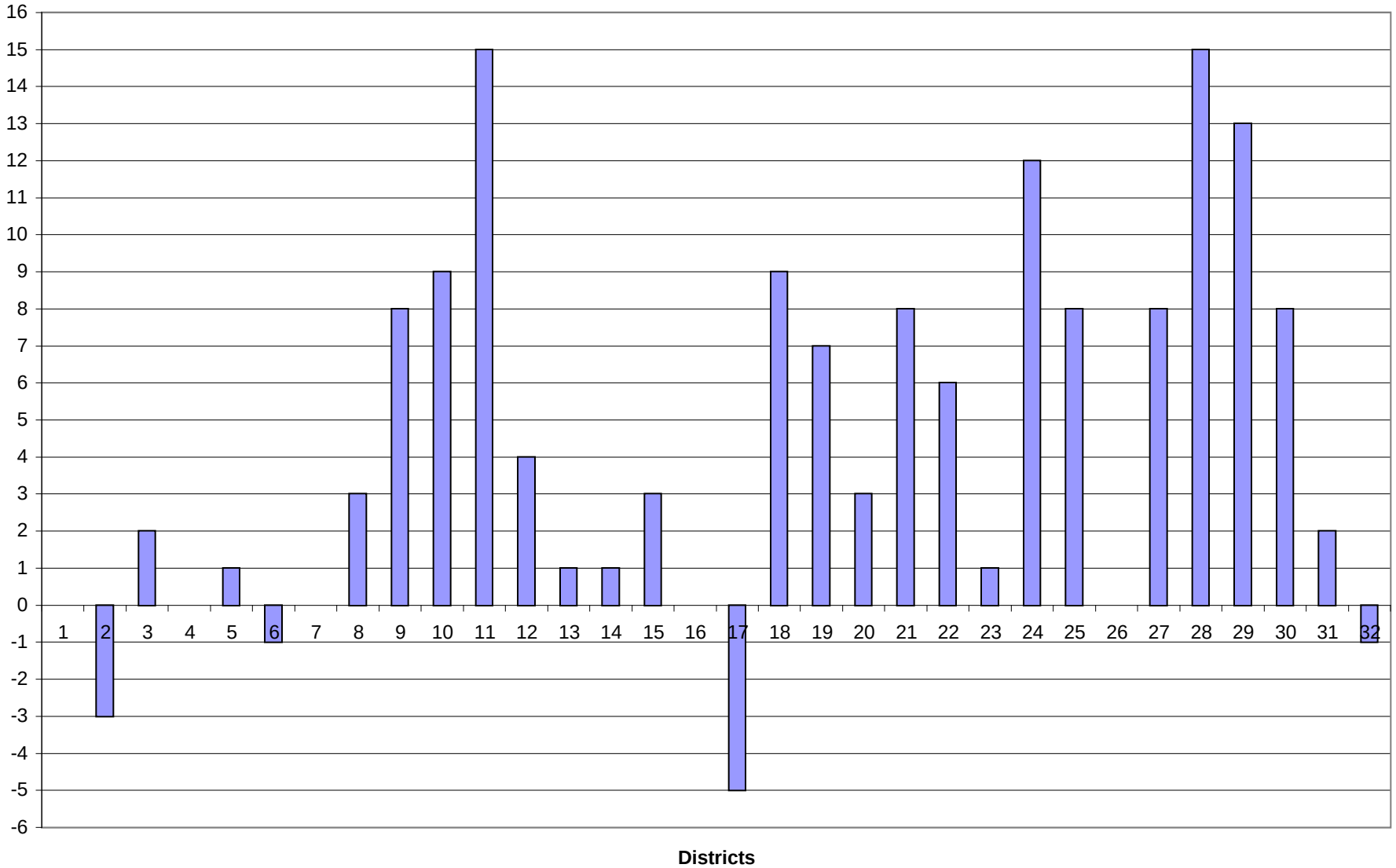
Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment-Capacity-Utilization, 1988-1989 and 2000-2001

Chart 11C: Change in number of severely overcrowded main elementary school buildings



Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment-Capacity-Utilization, 1988-1989 and 2000-2001

Chart 11D: Change in number of elementary school auxiliary buildings



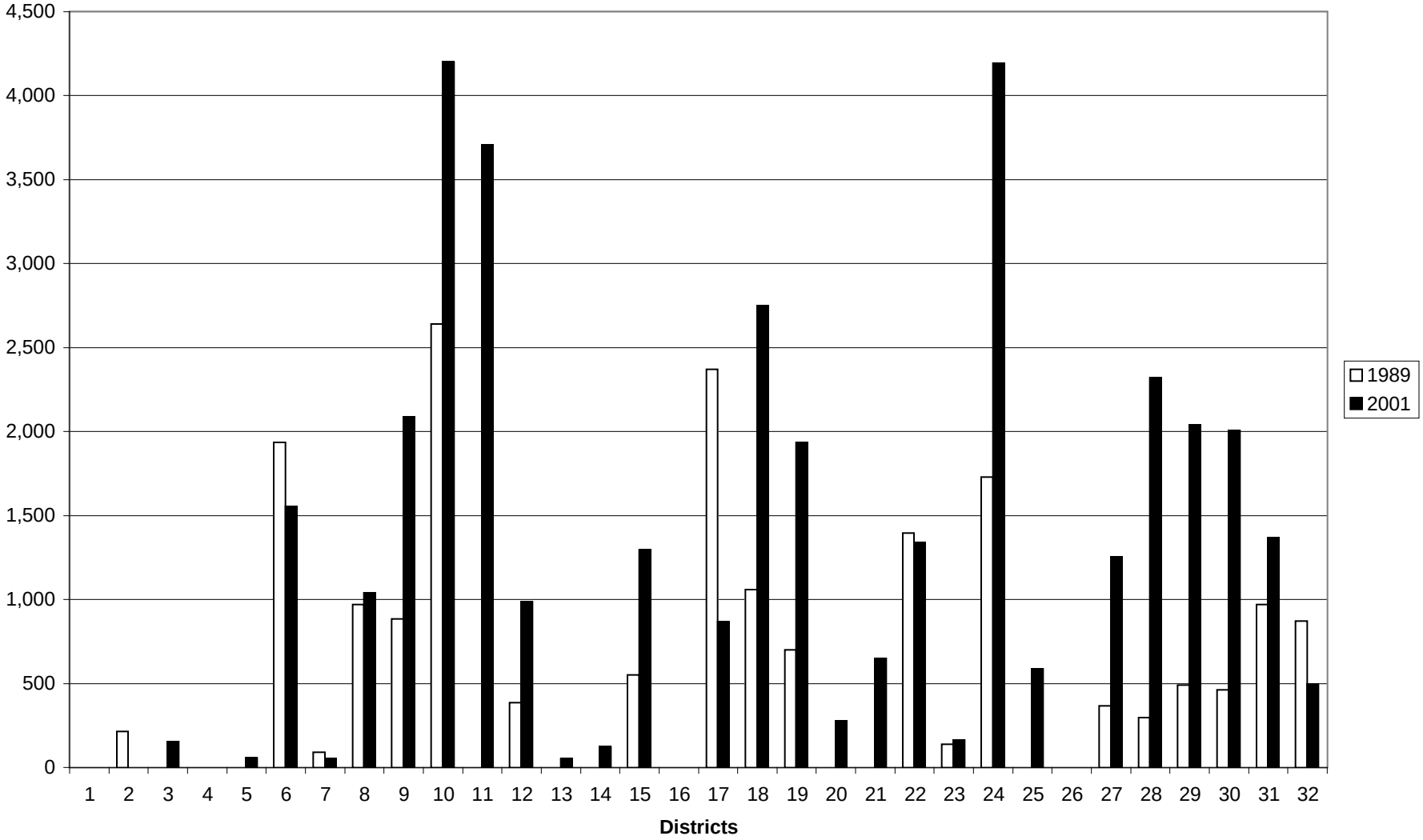
Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment-Capacity-Utilization, 1988-1989 and 2000-2001

Table 12: Elementary school students in auxiliary buildings (1989-2001)

District	1989	2001	Change	Percentage change
1	0	0	0	unchanged
2	214	0	-214	-100.00%
3	0	153	153	undefined
4	0	0	0	unchanged
5	0	54	54	undefined
6	1,933	1,552	-381	-19.71%
7	90	50	-40	-44.44%
8	969	1,039	70	7.22%
9	882	2,082	1,200	136.05%
10	2,640	4,197	1,557	58.97%
11	0	3,707	3,707	undefined
12	383	986	603	157.44%
13	0	50	50	undefined
14	0	120	120	undefined
15	548	1,294	746	136.13%
16	0	0	0	unchanged
17	2,369	866	-1,503	-63.44%
18	1,056	2,746	1,690	160.04%
19	699	1,934	1,235	176.68%
20	0	276	276	undefined
21	0	647	647	undefined
22	1,393	1,337	-56	-4.02%
23	135	161	26	19.26%
24	1,729	4,191	2,462	142.39%
25	0	584	584	undefined
26	0	0	0	unchanged
27	365	1,252	887	243.00%
28	295	2,319	2,024	686.10%
29	488	2,040	1,552	318.03%
30	461	2,004	1,543	334.71%
31	969	1,365	396	40.87%
32	869	496	-373	-42.92%
Totals	18,487	37,502	19,015	102.86%

Source: EPP calculations from data in the New York City Board of Education School Facilities Enrollment - Capacity - Utilization, 1988-1989 and 2000-2001

Chart 12A: Elementary school students in auxiliary buildings by district (1989-2001)



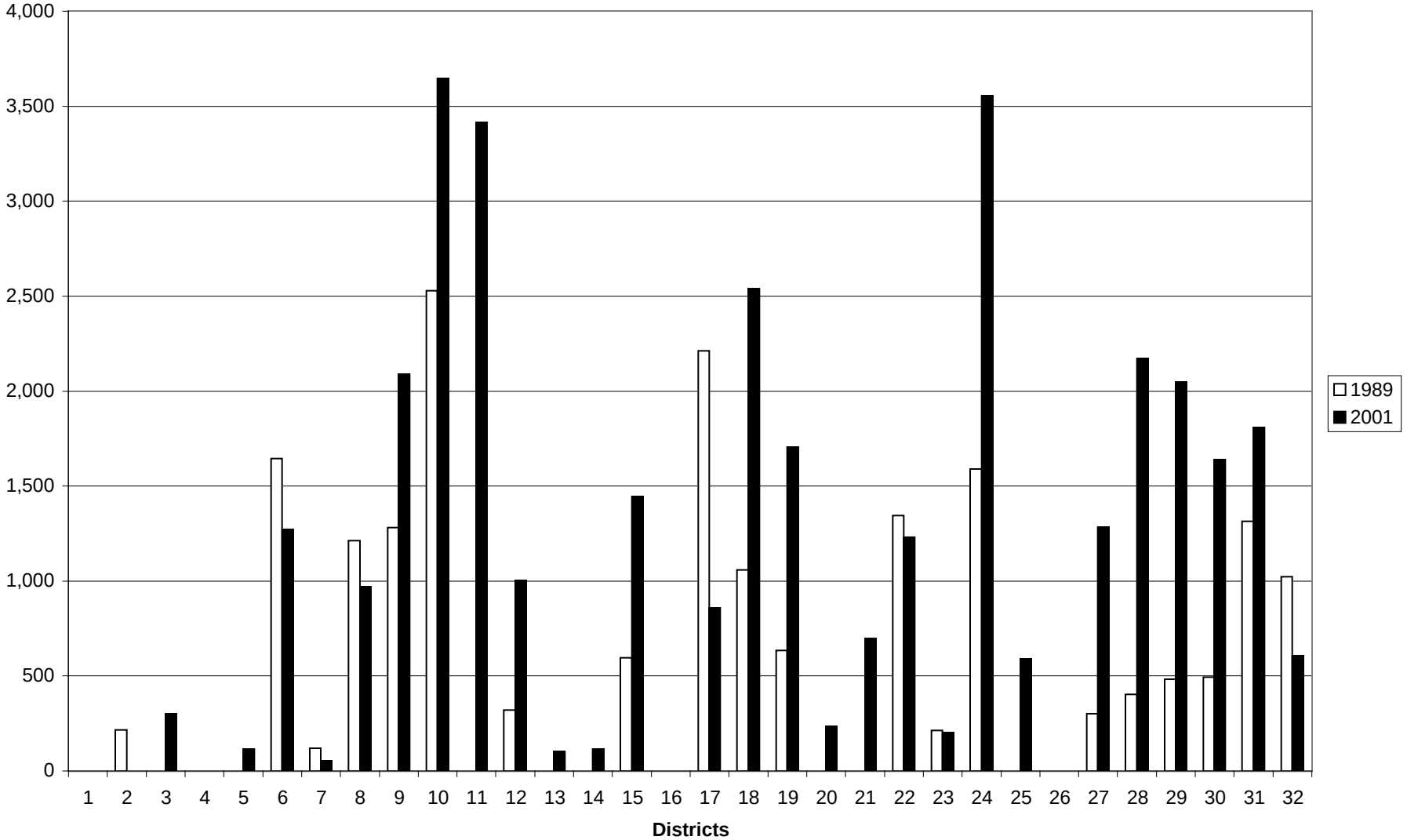
Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment-Capacity-Utilization, 1988-1989 and 2000-2001

Table 13: Capacity of Elementary School Auxiliary Buildings by District (1989 and 2001)

District	1989	2001	Change	Percentage change
1	0	0	0	unchanged
2	214	0	-214	-100.00%
3	0	299	299	undefined
4	0	0	0	unchanged
5	0	112	112	undefined
6	1,644	1,268	-376	-22.87%
7	119	51	-68	-57.14%
8	1,212	967	-245	-20.21%
9	1,279	2,087	808	63.17%
10	2,526	3,644	1,118	44.26%
11	0	3,410	3,410	undefined
12	320	998	678	211.88%
13	0	99	99	undefined
14	0	112	112	undefined
15	596	1,443	847	142.11%
16	0	0	0	unchanged
17	2,210	856	-1,354	-61.27%
18	1,056	2,535	1,479	140.06%
19	632	1,705	1,073	169.78%
20	0	233	233	undefined
21	0	693	693	undefined
22	1,344	1,229	-115	-8.56%
23	213	199	-14	-6.57%
24	1,588	3,552	1,964	123.68%
25	0	589	589	undefined
26	0	0	0	unchanged
27	300	1,281	981	327.00%
28	403	2,170	1,767	438.46%
29	481	2,046	1,565	325.36%
30	494	1,639	1,145	231.78%
31	1,313	1,807	494	37.62%
32	1,022	607	-415	-40.61%
Totals	18,966	35,631	16,665	87.87%

Source: EPP calculations from data in the New York City Board of Education School Facilities Enrollment - Capacity - Utilization, 1988-1989 and 2000-2001

Chart 13A: Capacity of elementary school auxiliary buildings by district (1989 and 2001)



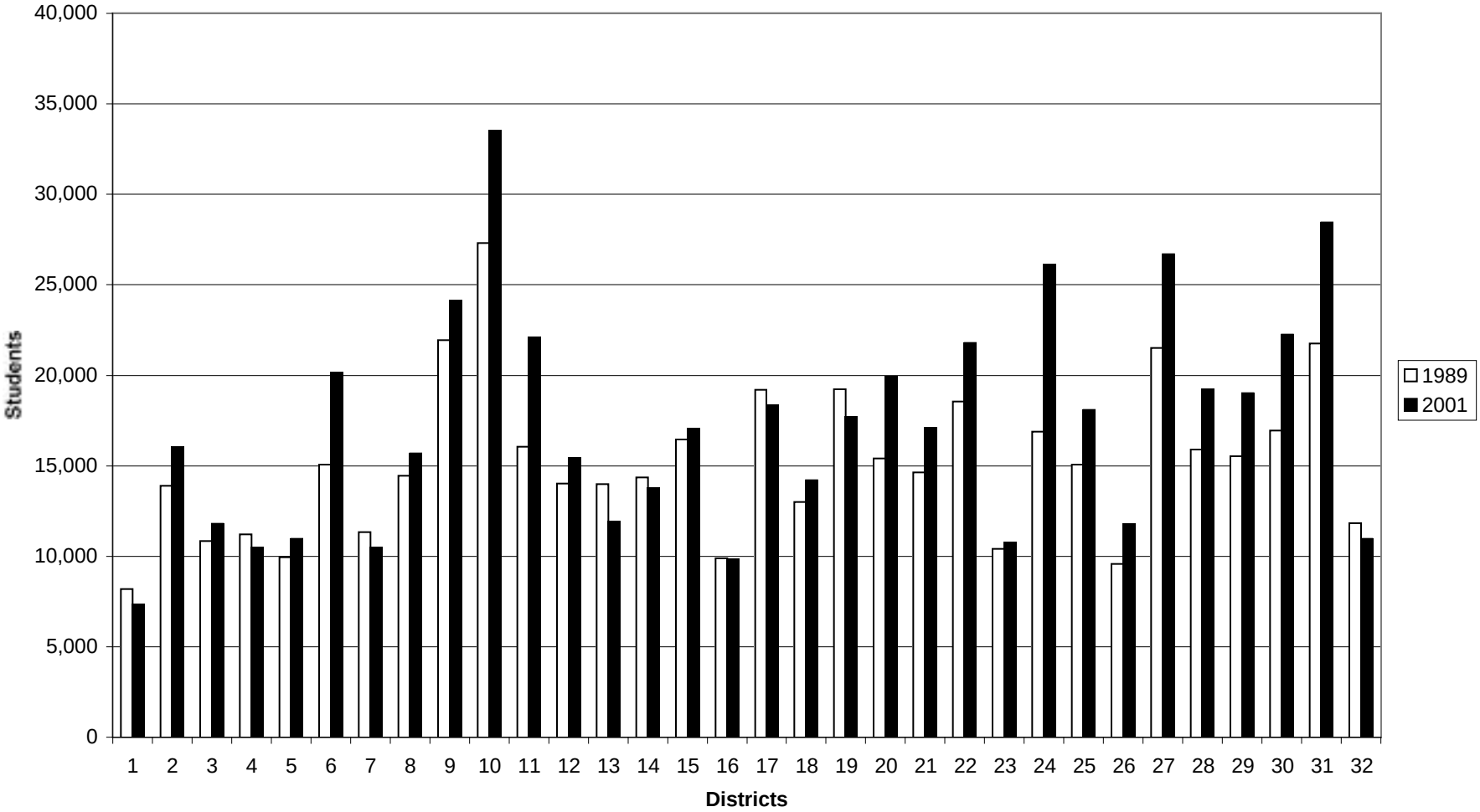
Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment-Capacity-Utilization, 1988-1989 and 2000-2001

Table 14: Elementary school enrollment by district

Disrict	1989	2001	Change	Percentage change
1	8,164	7,295	-869	-10.64%
2	13,881	15,996	2,115	15.24%
3	10,817	11,775	958	8.86%
4	11,208	10,441	-767	-6.84%
5	9,916	10,945	1,029	10.38%
6	15,047	20,151	5,104	33.92%
7	11,305	10,441	-864	-7.64%
8	14,437	15,661	1,224	8.48%
9	21,923	24,114	2,191	9.99%
10	27,306	33,506	6,200	22.71%
11	16,031	22,089	6,058	37.79%
12	14,003	15,421	1,418	10.13%
13	13,973	11,906	-2,067	-14.79%
14	14,335	13,747	-588	-4.10%
15	16,439	17,009	570	3.47%
16	9,862	9,805	-57	-0.58%
17	19,190	18,328	-862	-4.49%
18	12,979	14,200	1,221	9.41%
19	19,223	17,658	-1,565	-8.14%
20	15,387	19,903	4,516	29.35%
21	14,604	17,080	2,476	16.95%
22	18,531	21,787	3,256	17.57%
23	10,383	10,720	337	3.25%
24	16,861	26,076	9,215	54.65%
25	15,051	18,076	3,025	20.10%
26	9,552	11,743	2,191	22.94%
27	21,492	26,663	5,171	24.06%
28	15,872	19,204	3,332	20.99%
29	15,510	19,008	3,498	22.55%
30	16,919	22,245	5,326	31.48%
31	21,741	28,443	6,702	30.83%
32	11,803	10,953	-850	-7.20%
Total	483,745	552,389	68,644	14.19%

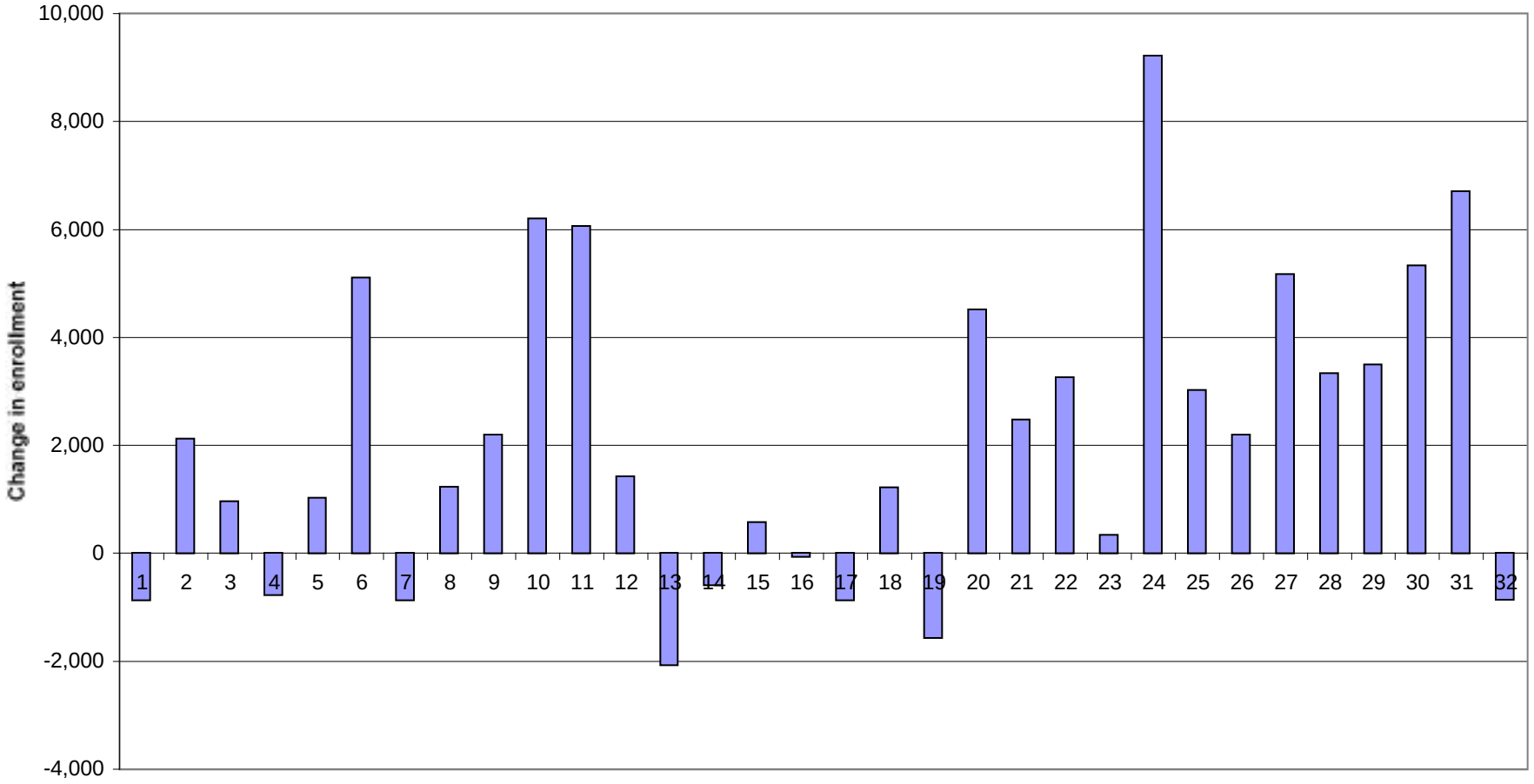
Source: EPP calculations from data in the New York City Board of Education School Facilities Enrollment - Capacity - Utilization, 1988-1989 and 2000-2001

Chart 14A: Elementary school enrollment by district



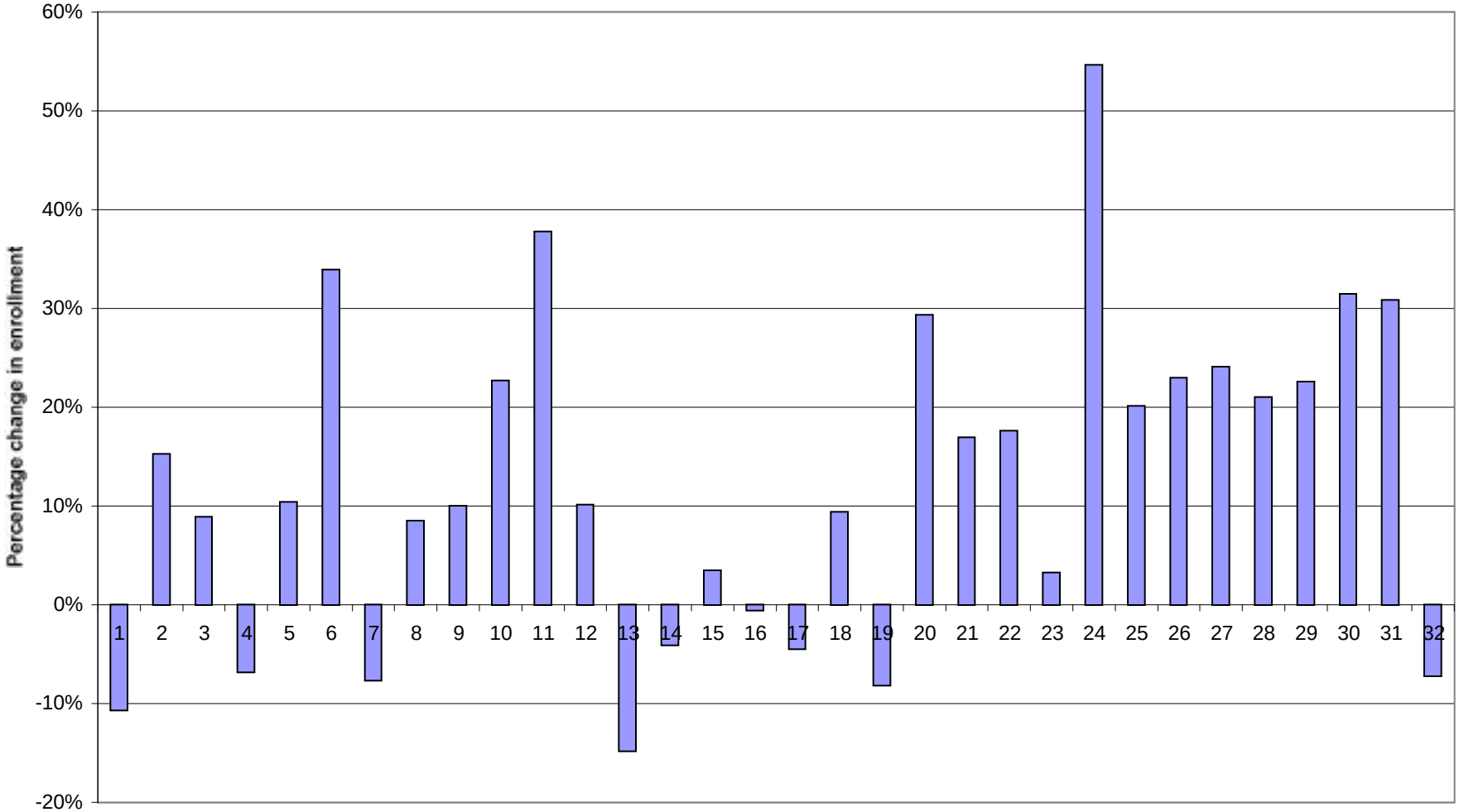
Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment-Capacity-Utilization, 1988-1989 and 2000-2001

Chart 14B: Change in elementary school enrollment 1989 to 2001



Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment-Capacity-Utilization, 1988-1989 and 2000-2001

Chart 14C: Percentage change in elementary school enrollment, 1989 to 2001



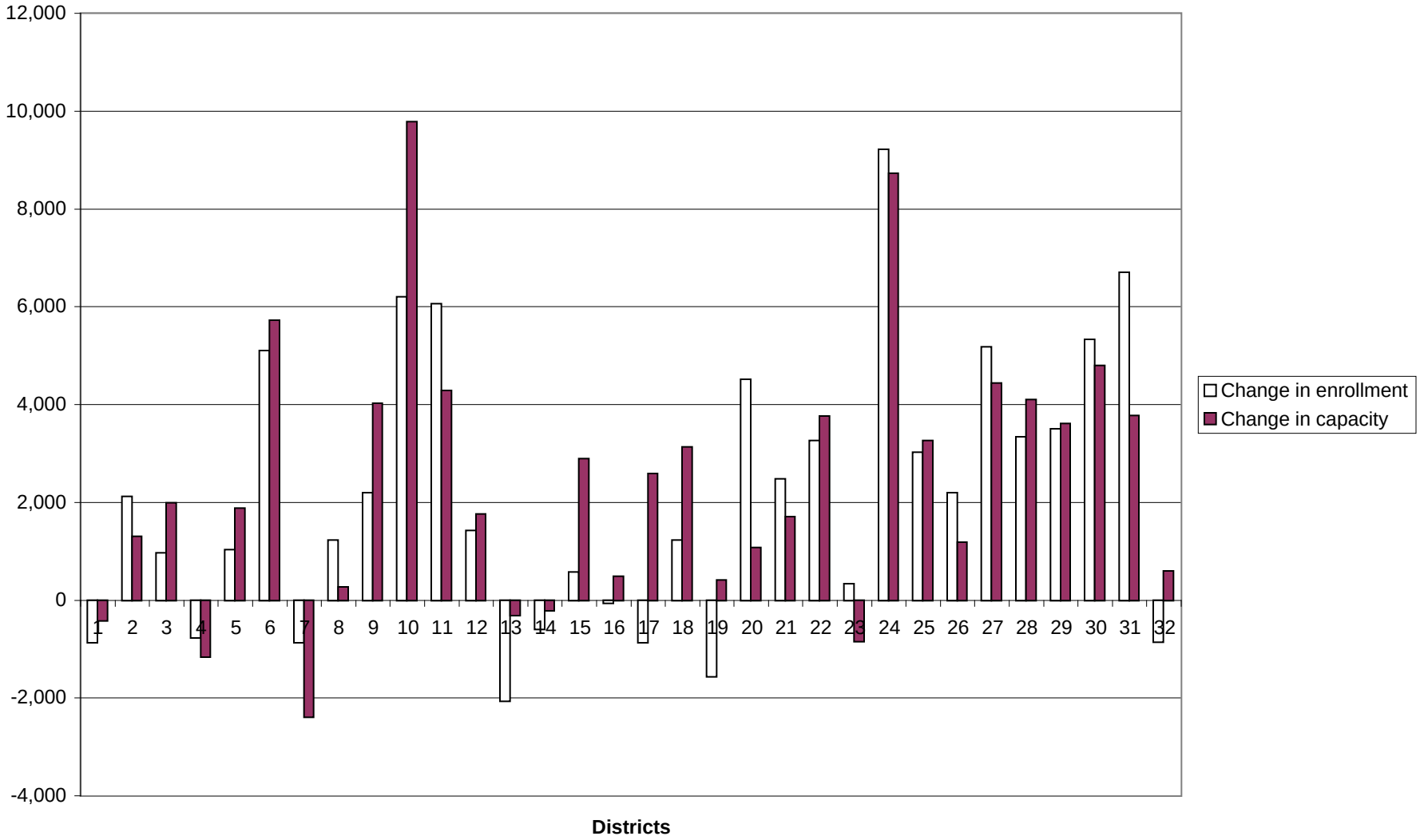
Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment-Capacity-Utilization, 1988-1989 and 2000-2001

Table 15: The causes of the change in the overload

Columns	A	B	C	D	E
District	Change in net overload (B-C)	Change in enrollment	Total change in Capacity (D+E)	Change in capacity of main buildings	Change in capacity of auxiliary buildings
1	-446	-869	-423	-423	0
2	810	2,115	1,305	1,519	-214
3	-1,027	958	1,985	1,686	299
4	391	-767	-1,158	-1,158	0
5	-844	1,029	1,873	1,761	112
6	-615	5,104	5,719	6,095	-376
7	1,522	-864	-2,386	-2,318	-68
8	956	1,224	268	513	-245
9	-1,828	2,191	4,019	3,211	808
10	-3,578	6,200	9,778	8,660	1,118
11	1,779	6,058	4,279	869	3,410
12	-339	1,418	1,757	1,079	678
13	-1,759	-2,067	-308	-407	99
14	-374	-588	-214	-326	112
15	-2,321	570	2,891	2,044	847
16	-544	-57	487	487	0
17	-3,446	-862	2,584	3,938	-1,354
18	-1,913	1,221	3,134	1,655	1,479
19	-1,968	-1,565	403	-670	1,073
20	3,447	4,516	1,069	836	233
21	773	2,476	1,703	1,010	693
22	-503	3,256	3,759	3,874	-115
23	1,179	337	-842	-828	-14
24	490	9,215	8,725	6,761	1,964
25	-233	3,025	3,258	2,669	589
26	1,013	2,191	1,178	1,178	0
27	735	5,171	4,436	3,455	981
28	-770	3,332	4,102	2,335	1,767
29	-107	3,498	3,605	2,040	1,565
30	536	5,326	4,790	3,645	1,145
31	2,926	6,702	3,776	3,282	494
32	-1,438	-850	588	1,003	-415
Totals	-7,496	68,644	76,140	59,475	16,665

Source: EPP calculations from data in the New York City Board of Education School Facilities Enrollment - Capacity - Utilization, 1988-1989 and 2000-2001

Chart 15A: Changes in enrollment and capacity in elementary schools, 1989 to 2001



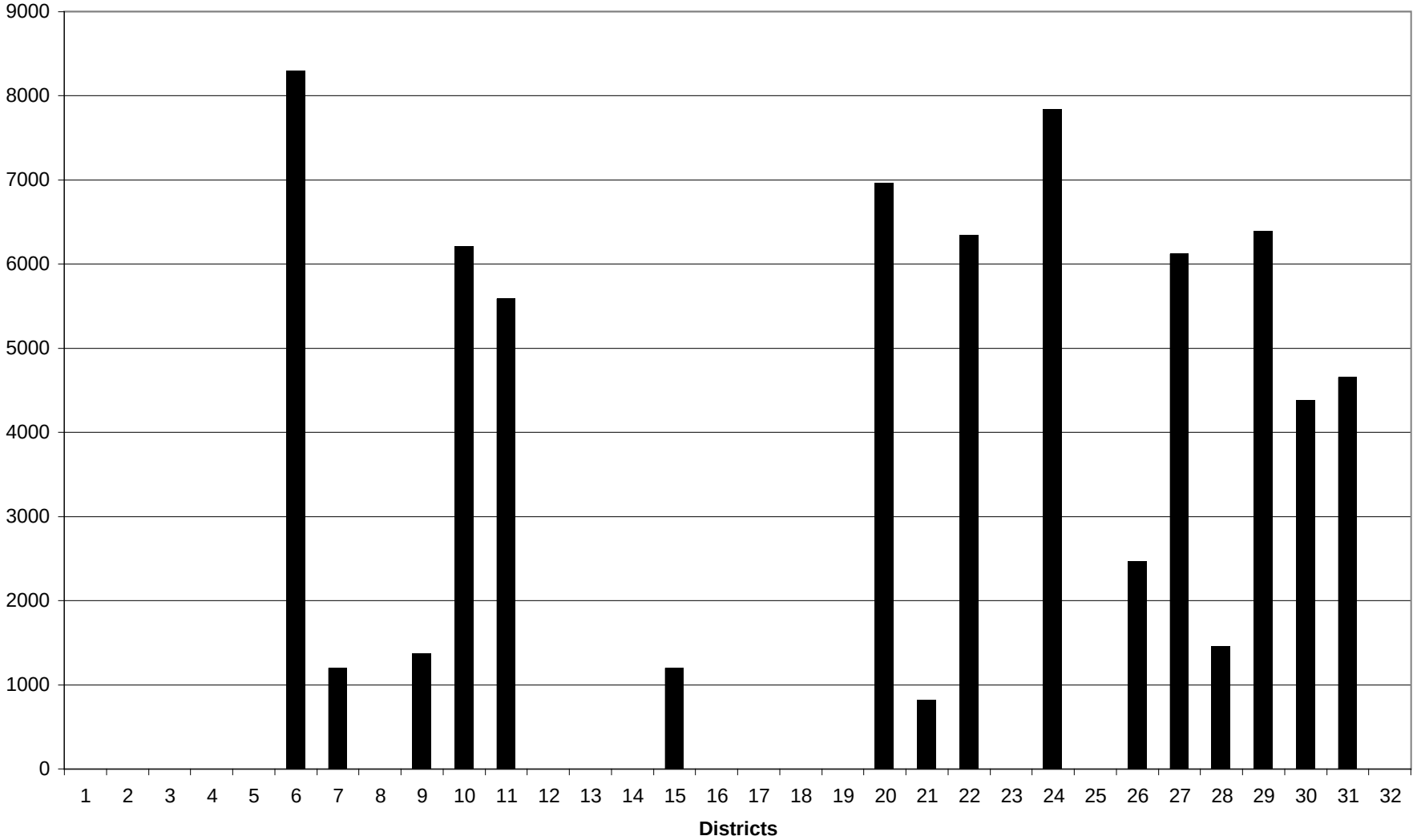
Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment-Capacity-Utilization, 1988-1989 and 2000-2001

Table 16: Students in Overcrowded Middle Schools by district and gross excess capaity (2001)

Districts	Students in overcrowded middle schools	Gross excess capacity
1	0	-1,816
2	0	-1,852
3	0	-656
4	0	-598
5	0	-1,437
6	8,284	0
7	1,190	-1,782
8	0	-1,742
9	1,361	-1,286
10	6,197	-943
11	5,576	-276
12	0	-1,479
13	0	-2,702
14	0	-2,983
15	1,190	-1,335
16	0	-1,411
17	0	-3,678
18	0	-532
19	0	-1,038
20	6,955	-404
21	805	-973
22	6,330	-189
23	0	-1,695
24	7,833	-203
25	0	-1,494
26	2,458	-272
27	6,110	-1,285
28	1,447	-1,764
29	6,378	-183
30	4,370	-666
31	4,644	-1,372
32	0	-1,539
Total	71,128	-39,585

Source: EPP calculations from data in the New York City Board of Education School Facilities Enrollment - Capacity - Utilization, 1988-1989 and 2000-2001

Chart 16A: Students in overcrowded middle schools



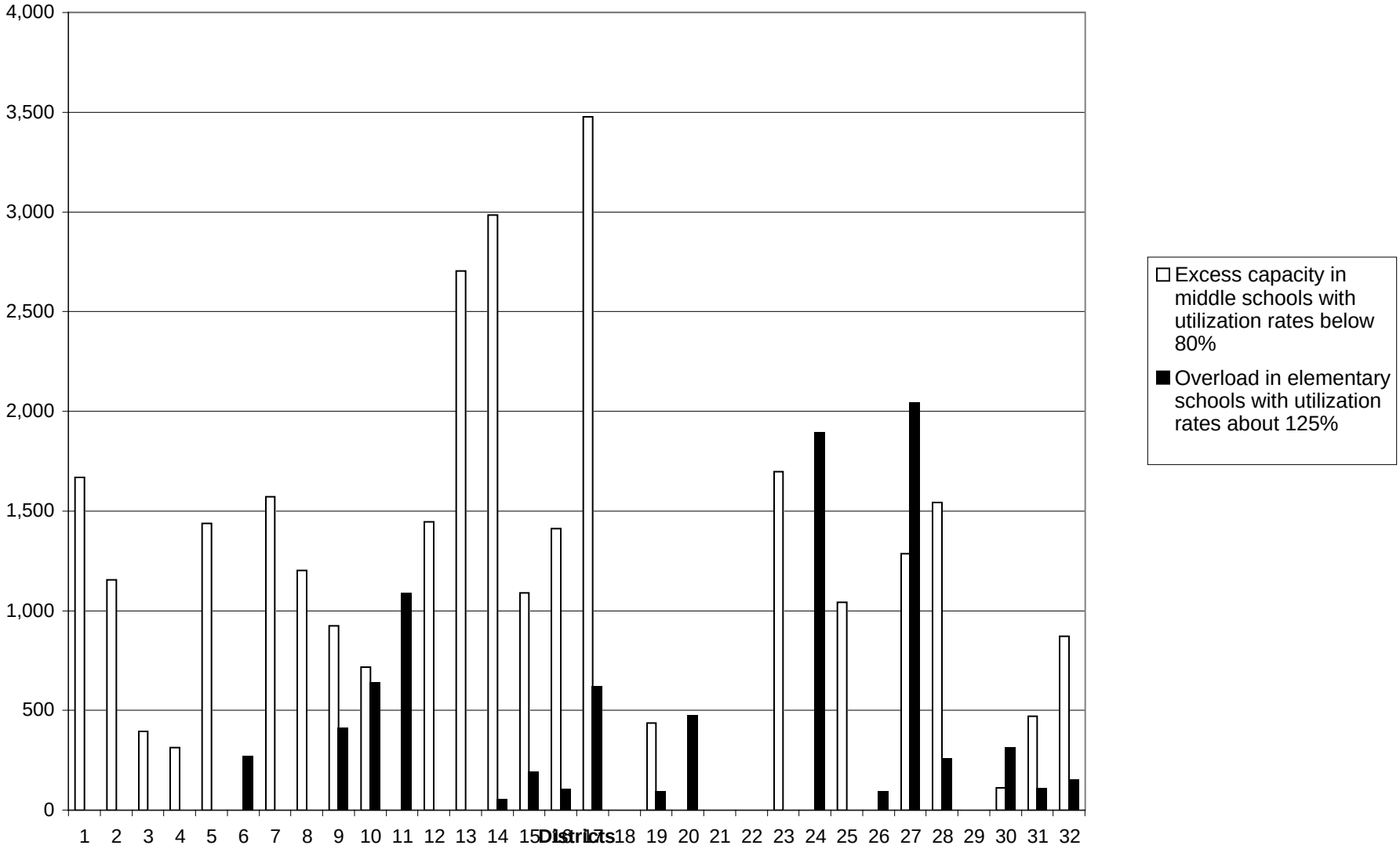
Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment-Capacity-Utilization, 1988-1989 and 2000-2001

Table 17: Is relocation a solution to severe overcrowding?

Districts	Excess capacity in middle schools with unitilzation rates below 80%	Gross overload in severely overcrowded elementary school main buildings	Maximum possible decrease in severe overload by relocation	Theoretical overload if elementary students were relocated to middle schools with available space	maximum possible percentage decrease
1	1,666	0	-	0	0.00%
2	1,153	0	-	0	0.00%
3	393	0	-	0	0.00%
4	311	0	-	0	0.00%
5	1,437	0	-	0	0.00%
6	0	264	0	264	0.00%
7	1,571	0	-	0	0.00%
8	1,201	0	-	0	0.00%
9	**922**	**406**	**406**	**0**	**100.00%**
10	**716**	**634**	**634**	**0**	**100.00%**
11	0	1,083	0	1,083	0.00%
12	1,444	0	-	0	0.00%
13	2,702	0	-	0	0.00%
14	**2,983**	**49**	**49**	**0**	**100.00%**
15	**1,089**	**189**	**189**	**0**	**100.00%**
16	**1,411**	**100**	**100**	**0**	**100.00%**
17	**3,475**	**615**	**615**	**0**	**100.00%**
18	0	0	-	0	0.00%
19	**434**	**90**	**90**	**0**	**100.00%**
20	0	469	0	469	0.00%
21	0	0	-	0	0.00%
22	0	0	-	0	0.00%
23	1,695	0	-	0	0.00%
24	0	1,891	0	1,891	0.00%
25	1,041	0	-	0	0.00%
26	0	89	0	89	0.00%
27	**1,285**	**2,040**	**1,285**	**755**	**62.99%**
28	**1,540**	**253**	**253**	**0**	**100.00%**
29	0	0	-	0	0.00%
30	**110**	**309**	**110**	**199**	**35.60%**
31	**470**	**104**	**104**	**0**	**100.00%**
32	**871**	**148**	**148**	**0**	**100.00%**
Total	**29,920**	**8,733**	**3,983**	**4,750**	**45.61%**

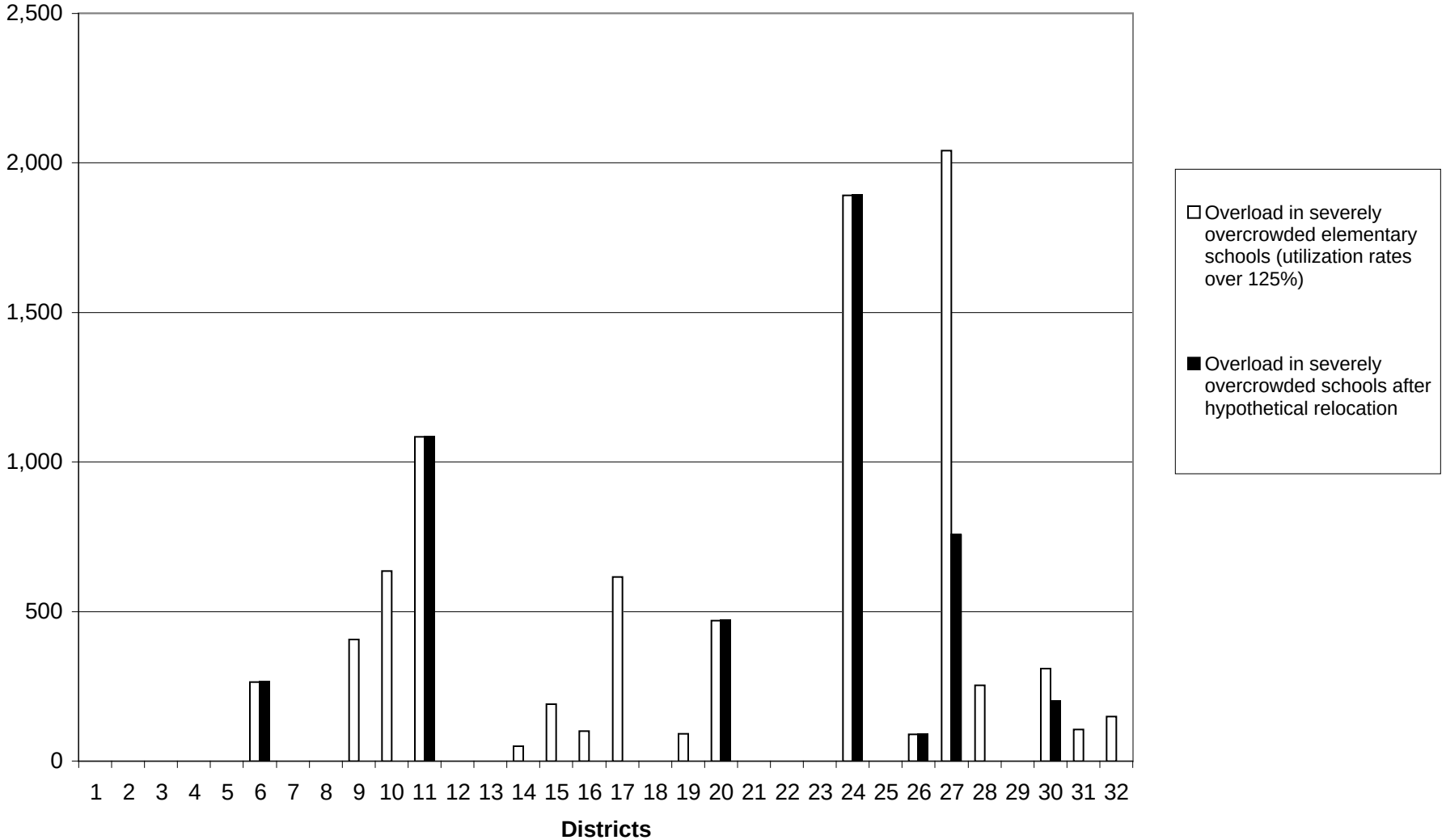
Source: EPP calculations from data in the New York City Board of Education School Facilities Enrollment - Capacity - Utilization, 1988-1989 and 2000-2001

Chart 17A: Is relocation a solution to severe overcrowding? One



Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment-Capacity-Utilization, 1988-1989 and 2000-2001

Chart 17B: Is relocation a solution to severe overcrowding? Two



Source: EPP calculations from data in the New York City Board of Education School Facilities: Enrollment-Capacity-Utilization, 1988-1989 and 2000-2001

Table 18: Relocating younger students

Districts	Potential space for Kindergarden through third grade students in middle schools with utilization rates below 80%	Gross overload in severely overcrowded elementary school main buildings	Maximum possible decrease in severe overload by relocation	Theoretical overload if elementary students were relocated to middle schools with available space	maximum possible percentage decrease
1	1,344	0	0	0	0.00%
2	930	0	0	0	0.00%
3	317	0	0	0	0.00%
4	251	0	0	0	0.00%
5	1,159	0	0	0	0.00%
6	0	264	0	264	0.00%
7	1,267	0	0	0	0.00%
8	969	0	0	0	0.00%
9	**744**	**406**	**406**	**0**	**100.00%**
10	**577**	**634**	**634**	**0**	**100.00%**
11	0	1,083	0	1,083	0.00%
12	1,165	0	0	0	0.00%
13	2,179	0	0	0	0.00%
14	**2,406**	**49**	**49**	**0**	**100.00%**
15	**878**	**189**	**189**	**0**	**100.00%**
16	**1,138**	**100**	**100**	**0**	**100.00%**
17	**2,802**	**615**	**615**	**0**	**100.00%**
18	0	0	0	0	0.00%
19	**350**	**90**	**90**	**0**	**100.00%**
20	0	469	0	469	0.00%
21	0	0	0	0	0.00%
22	0	0	0	0	0.00%
23	1,367	0	0	0	0.00%
24	0	1,891	0	1,891	0.00%
25	840	0	0	0	0.00%
26	0	89	0	89	0.00%
27	**1,036**	**2,040**	**1,036**	**1,004**	**50.80%**
28	**1,242**	**253**	**253**	**0**	**100.00%**
29	0	0	0	0	0.00%
30	**89**	**309**	**89**	**220**	**28.71%**
31	**379**	**104**	**104**	**0**	**100.00%**
32	**702**	**148**	**148**	**0**	**100.00%**
Total	**24,129**	**8,733**	**3,713**	**5,020**	**42.52%**

Source: EPP calculations from data in the New York City Board of Education School Facilities Enrollment - Capacity - Utilization, 1988-1989 and 2000-2001

Appendix Two:
Construction 1989 to 2001

This section of the appendix focuses on construction projects undertaken by the city since the School Construction Authority was created in 1989. The SCA provided all the basic data for these tables and charts. Several SCA definitions must be understood:

- **New schools** are new main school buildings. A few new schools use modular construction, a few are replacement schools (a new school built on the site of an old school) and a few are converted from other kinds of buildings, but most are regular school buildings.
- **Additions** are additional rooms built onto existing school buildings. Some are built from modular construction. Not all additions are specifically aimed at increasing the number of classrooms in a building; they may add a gym, an auditorium, an office, or any other kind of addition.
- **Modernizations** gut and remodel an entire school building. These projects are usually not aimed at increasing the capacity of a school, but in a few cases they have resulted in increased capacity.
- **Additions-modernizations**, abbreviated as "additions-mod," are combined projects in which an addition to the school is built and the rest of the school is gutted and modernized.
- **Mini schools** are sturdy prefabricated buildings built on school grounds, but not connected to the main school buildings. Only a few of these were built in the early 1990s.
- **Transportable classroom units (TCUs)**, also known as "transportables," are trailers built for school use, which tend to be installed quickly and cheaply in school parking lots and grounds.
- **Temporary classroom buildings (TCBs)** are similar to TCUs, but built on sight. They are used interchangeably with TCUs by the Board of Education. Construction companies that specialize in TCBs will bid against companies specializing in TCUs and the SCA will build whichever type of unit wins the bid.
- Other projects, including **athletic fields** and **site work**, do not—or are not primarily designed—to increase capacity. Capital repairs, which also do not increase capacity, are not included in this study.

The term "seats" refers to the *net* increase in capacity caused by a construction project using the BOE's definition of building capacity for the grades expected to be using the school. Thus, if a replacement school has a capacity of 1200 and it replaces a school with a capacity of 1000, the number of seats assigned to that project is 200. However, the capacity of a building can change after construction of the building if the district decides to use rooms in a different way than planned when construction was undertaken (i.e. converting a classroom to an office or vice versa). The term "seat turnover" is the date at which the completed school was turned over to the school district by the SCA. "Project description" defines the type of project.

Another important point to keep in mind is that construction costs do not include the cost of obtaining the land for these schools. Land acquisition costs can be substantial, especially for new schools. And for leases land acquisition makes up all or most of the cost of the space.

Table 1: New Schools built by the SCA, inception to 2001. This table lists every main school building built by the SCA from its inception to 2001 in order of its completion date. The average new school costs $45,101 per seat, but the large variability in costs between schools is striking. The different types of new school projects explain some of this variation. Replacement schools are more expensive per seat than new schools because they include the cost of demolishing an old school, and only the net increase in capacity counts as "seats." Modular new schools are cheaper than most other new schools—only about $32,000 per student. The one building conversion in this period of time that resulted in a new main school building cost only $8,634 per student. Leaving out all of these types of new schools gives an average of $38,639 per seat for regular new schools. However, there is still an enormous range in cost from $20,472 to $112, 456 per seat. According to a spokesperson for the SCA, this wide range in cost results from three kinds of changes: First, market conditions in the construction industry in New York City vary considerably year-to-year, and even month-to-month. Construction bids fluctuate greatly depending on market conditions. Second, the timetable for school construction varies depending on how pressing the need for the new school is. Quicker timetables create greater construction costs such as overtime pay. Third, the cost of readying the site for construction varies greatly from site to site. For example, if the city obtains a vacant lot, it can build right away with basically no site preparation costs, but if the city obtains an old gas station it has to demolish the existing buildings and remove any hazardous materials such as gasoline and diesel fuel that may have seeped into the soil. According to the SCA, all of these factors together create the great variation in cost of producing schools built to the same standards.

Table 1A: The relationship between school size and construction cost per seat. It is clear that smaller schools tend to be more expensive per seat than larger schools. The average seat in a school with 600 or fewer seats costs about $10,000 more than a seat in a school with 1,000 or more seats.

Table 2: Additions built by SCA, inception to 2001, by completion date. This table shows each of the additions built by the SCA since 1989. Note that modular additions have become more common in the last few years. Two of the first projects have a zero cost because the SCA merely took over the project from the BOE when it was nearing completion. The summary data at the bottom of the chart shows that the average addition costs about $31,181 per seat. However, separating additions by type shows that modular additions cost only $21,393 per seat, while nonmodular additions cost $43,101 per seat.

Table 3: Additions/Modernizations conducted by the SCA since inception, by completion date. This table shows the additions/modernizations conducted by the SCA in the last twelve years. Again, the first two projects have a zero cost. Excluding these from the total shows that the average addition/modernization costs 76,789 dollars per seat. However, this cost is misleading since the goal of an addition/modernization is not only to create new space for seats, but also to modernize the existing space.

Table 4: Mini schools created by SCA since inception, by completion date. Only nine mini schools were built by the SCA, all in 1990, 1991, and 1992. Since then, at least one school has had a modular addition that is not attached to the main building—similar to a mini school. The average minischool cost only $17,151 per seat, but keep in mind that these were built in the

recession of the early 1990s and are only slightly cheaper than modular additions, most of which were built during the market boom of the late 1990s.

Table 5: TCUs and TCBs created by the SCA by completion date, inception to 2001. The most apparent fact on this chart is that no TCUs were used before 1995, but suddenly hundreds of them have been brought into use since then. Some TCUs have a zero cost assigned to them, but this is for a different reason than the zero cost of other types of projects. The SCA often takes bids on a number of transportables for different schools as a single project, or it moves a TCU from one school to another. For these projects all of the cost is assigned to one school, while the seats are assigned to the schools when the TCUs are actually located. Thus, some TCUs show a very high cost per seat, while others show a zero cost. The average—5,133 dollars per seat—is an accurate reflection of the average cost of a TCU/TCB. These are far cheaper than any other buildings, but they are not designed to last as long and they are not the same quality instructional space as other projects.

Table 6: Lease alterations conducted by SCA, inception to 2001. Most leased property is adapted for school use by the landlord, but in these few cases, the SCA was assigned to adapt the property. In those instances in which the cost is zero, the SCA conducted the work but the landlord or the BOE paid the cost of the conversion. These costs are construction costs only and do not reflect the actual cost of leasing the property. Thus, the average alteration cost for these leased reveals little or nothing about the cost of using least property to increase school capacity.

Table 7: Other projects, athletic fields, modernizations, and site work, conducted by the SCA, inception to 2001. Except for two projects, none of these increased school capacity. They were undertaken for other reasons. These projects do not include capital repairs, which take up another portion of the SCA's budget.

Table 8: Summary of SCA construction, inception to 2001. This table and the accompanying charts summarize the types of SCA construction since its inception in 1989, excluding capital repairs. Additions/modernizations are the most expensive in terms of dollars per seat ($69,034 versus $38,381) created, but this is because half of the project (the modernization) is not intended to increase the number of seats. The average addition costs only $30,816 dollars per seat, far less than the average new school, but this difference is mostly attributable to the fact that far more modular additions have been built than modular new schools (see tables 1 and 2 above). Mini schools are cheaper yet ($17,151), and TCUs/TCBs are far cheaper ($5,133), but these differences largely reflect the durability of these types of buildings.

> **Chart 8A: Number of seats created by SCA by type of project, 1992-2001.** The pie chart divides the seats created by the SCA into the various types of projects, excluding projects not designed to increase capacity. New schools account for more seats than any other type of project (45,101 or about 45%), but not a majority. TCUs, which have only been built since 1995, account for one-fourth of all new seats created in the last 12 years.
>
> **Chart 8B: SCA spending by type of construction project.** New schools, which account for only 45% of new seats, took up 58% of the SCA's construction budget over the last 12 years, while TCUs, which account for 25% of new seats took up only 4% of the SCA's budget.

Chart 8C: Construction cost per seat of various types of SCA projects. This chart shows the large variability in the cost per seat of various types of projects. Although there is a large variation in cost per seat, for the most part this variation reflects the durability of the project and the aim of the project. TCUs are inexpensive because they are designed to last only for a few years.

Table 9: The number of seats completed each year by the SCA, inception to 2001. This table shows the number of seats turned over to the BOE each year by the SCA, and the cost of those projects. It does **not** show the yearly budget of the SCA. In most cases construction projects take a number of years and most of the spending did not take place in the year the project was completed. However, a pattern is evident from this table and the accompanying charts.

Chart 9A: Seats created by SCA by year of completion 1990 to 2001. The number of seats created per year peaked in 1997 and has declined since. (Data for 2001 runs only through October, but includes most of the construction that was completed in that year.)

Chart 9B: Spending on SCA construction projects by year of completion in millions of dollars. Spending follows nearly the same pattern as seats, peaking in 1997 and declining sharply thereafter. This pattern reflects a decrease in the number of projects begun since the mid 1990s.

Chart 9C: Average spending per seat by year of completion. Spending per seat follows a very different pattern in the number of seats or capacity. It peaks in 1993, declines and then peaks again in 2001. The primary reason for this pattern is the type of projects created by the SCA each year. The decline in spending per seat in the mid to late 1990s was caused by the sudden change in strategy towards building TCUs and TCBs. Construction of these fell off considerably in 2001, driving up the average for all projects.

Table 10: Changes in construction and cost per seat of new schools over time. (Excludes replacement schools and building conversions.) **Table 10A: New Schools by year, since inception of SCA.** This table and the accompanying charts show the number of schools completed each year by the SCA, the spending on those projects, the number of seats created by those projects, and the cost per seat of each project. No new schools were completed by the SCA before 1992. The decrease in new school completion after 1996 is evident from table 10B and from charts 10A, 10B, and 10C. **Table 10B: New Schools Completed 1992 to 1996 and 1996 to 2001.** This table shows a slight increase in school costs over time. The average seat in a new school completed after January 1, 1997 costs 3.55% more than the average seat in a school completed by the SCA before 1997. One reason why costs have not increased more dramatically is that the SCA built four modular schools in 1999, but none in the early period. Modular schools are cheaper to build than regular new schools (see table 1). **Table 10C: New schools completed during each of the capital plans.** This table shows a little more dramatically the increase in cost over time. New schools completed after July 1, 1999 (during the third capital plan) cost nearly 20% more than new schools completed before June 30, 1994 (during the first capital plan).

Chart 10A: New schools by year of completion since the inception of the SCA. New school creation reached a high of 7 per year in 1995, 1996, and 1999. One evident feature of this chart is that—despite the 7 schools created in 1999—more new school were completed in the 5 years from 1992 to 1996 than were completed in the five years from 1997 to 2001. 30 new schools were completed in the first 5 years and only 20 in the second 5 years.

Chart 10B: Number of seats in new schools by year of completion, 1992-2001. The pattern of seats created in new schools unsurprisingly follows the pattern of new schools completed, peaking in 1995 and then again in 1999. Seats in new schools completed by 1996 total more than 28,000, but seats completed after total less than 17,000.

Chart 10C: New York City's spending on new schools by year of completion, 1992-2001 in millions of dollars. The pattern of spending closely matches the pattern of new schools completed and the pattern of seats created, peaking in 1995 and 1999. The drop off in spending for projects completed after 1996 is evident here as well. More than $1 billion were spent for new schools completed before 1996, but less than $640 million were spent on new schools completed after 1996. That is a drop of nearly 40 percent.

Chart 10D: Average cost per seat of new schools by year of completion, 1992 to 2001. The pattern shows gradually increasing costs over the 10 years with some fluctuations. New school completion costs dropped in 1998 and 1999 largely because several modular new schools were completed in those years. Modular schools cost less than regular schools and drive down the average cost.

Table 11: Creation of seats in elementary schools by type of project, inception of SCA to 2001. This table shows how many seats have been created in elementary schools in the last 12 years, and by what type of project. More than 76,000 seats have been created, about 28,000 in new schools, about 22,000 in additions and addition/modernizations, and more than 20,000 in TCUs and TCBs.

Table 12: Construction and changes in capacity compared, elementary schools, 1989 to 2001. According to the BOE the capacity of elementary school buildings has increased by 76,140 seats since 1989. According to the SCA, it has created 72,566 seats since its inception in 1989. The difference can be accounted for by changes in capacity rules, changes in the use of buildings (converting class space to other uses or vice versa), or by the use of leased space, which is not counted by the SCA, unless the SCA is involved in adapting the leased space.

Table 1: New Schools built by the SCA, inception to 2001

School	B	D	Project Description	Completion date	Seats	Cost	Cost/Seat
I.S. 218	M	06	NEW SCHOOL	2/18/92	1,810	40,296,000	22,263
P.S. 23	X	10	NEW SCHOOL	9/8/92	650	28,483,000	43,820
P.S. 279	X	10	NEW SCHOOL	9/8/92	998	38,811,000	38,889
P.S./I.S. 217 (ROOSEVELT ISL.)	M	02	NEW SCHOOL	9/30/92	840	29,937,000	35,639
P.S. 92	Q	30	REPLACEMENT SCHOOL	2/1/93	650	27,496,000	42,302
P.S. 5	M	06	NEW SCHOOL	2/26/93	998	31,567,000	31,630
EARLY CHILDHOOD #1 (P.S. 170)	X	09	NEW SCHOOL	4/9/93	300	11,282,000	37,607
P.S. 6 (PS 600B)	K	17	NEW SCHOOL	9/1/93	650	22,815,000	35,100
P.S. 12 (PS 900A)	K	17	NEW SCHOOL	9/1/93	998	34,991,000	35,061
P.S. 48	M	06	NEW SCHOOL	9/3/93	700	43,668,000	62,383
P.S. 528	M	06	NEW SCHOOL	9/17/93	360	7,370,000	20,472
P.S. 209 (FORMER PS 9 AX)	X	10	NEW SCHOOL	1/31/94	362	9,878,000	27,287
I.S. 306 (206 A)	X	10	NEW SCHOOL	2/1/94	1,810	57,370,000	31,696
I.S. 2	K	17	NEW SCHOOL	8/31/94	1,200	33,740,000	28,117
P.S. 37 (PS 600 TIBBET GARDEN)	X	10	NEW SCHOOL	8/31/94	600	25,356,000	42,260
P.S. 7 (AKA P.S. 1)	Q	24	NEW SCHOOL	9/9/94	1,200	43,519,000	36,266
I.S. 90	M	06	NEW SCHOOL	9/12/94	1,800	44,330,000	24,628
P.S. 51 (ECC)	Q	27	NEW SCHOOL	1/31/95	297	8,993,000	30,279
TOWNSEND HARRIS H.S.	Q	78	NEW SCHOOL	4/24/95	1,034	59,713,000	57,750
P.S. 8 (PS 600C)	M	06	NEW SCHOOL	5/17/95	650	23,189,000	35,675
P.S. 4	M	06	NEW SCHOOL	6/30/95	650	20,079,000	30,891
P.S. 3	X	10	NEW SCHOOL	6/30/95	650	25,143,000	38,682
P.S. 15	X	10	NEW SCHOOL	8/28/95	1,200	58,978,000	49,148
WEST QUEENS HS	Q	78	NEW SCHOOL	9/14/95	2,526	90,004,000	35,631
P.S. 376A	K	32	REPLACEMENT SCHOOL	11/13/95	650	23,103,000	35,543
49 FLATBUSH CONVERSION	K	78	PARTIAL BUILDING CONVERSION	11/30/95	650	6,270,000	9,646
EARLY CHILDHOOD #3 (P.S. 172)	X	09	NEW SCHOOL	1/15/96	300	14,627,000	48,757
P.S. 226 ANNEX (VAN CARPENTER)	X	10	REPLACEMENT SCHOOL	2/1/96	250	14,586,000	58,344
P.S. 176	M	06	NEW SCHOOL	3/5/96	650	21,847,000	33,611
P.S. 34	X	75	NEW SCHOOL	8/16/96	228	25,640,000	112,456
P.S. 22 (900B)	K	17	NEW SCHOOL	8/30/96	998	32,827,000	32,893
P.S. 20	X	10	NEW SCHOOL	8/30/96	1,200	65,475,000	54,563
P.S. 43	Q	27	NEW SCHOOL	9/4/96	1,200	51,322,000	42,768
I.S. 5	Q	24	NEW SCHOOL	11/12/96	1,200	44,902,000	37,418
P.S. 721 (OTC)	Q	75	REPLACEMENT SCHOOL	2/28/97	504	34,171,000	67,800
P.S. 721 OTC	K	75	REPLACEMENT SCHOOL	6/15/97	500	35,310,000	70,620
EARLY CHILDHOOD #2 (P.S. 171)	X	09	NEW SCHOOL	6/17/97	300	17,224,000	57,413
P.S. 24 (SUNSET PARK)	K	15	NEW SCHOOL	6/30/97	873	28,721,000	32,899
EARLY CHILDHOOD #4 (P.S. 173)	X	09	NEW SCHOOL	7/14/97	300	18,702,000	62,340
49 FLATBUSH CONVERSION	K	78	BUILDING CONVERSION - PHASE 2	10/30/97	360	2,450,000	6,806
P.S. 56 (P.S. 900)	R	31	NEW SCHOOL	5/12/98	955	30,898,000	32,354
GATEWAY HEALTH & SCIENCES H.S.	Q	78	NEW SCHOOL	6/30/98	591	18,232,000	30,849
P.S. 54 (NEW SCHOOL)	X	10	NEW SCHOOL	5/3/99	622	28,849,000	46,381
P.S./I.S. 235 (@ X235)	X	09	NEW SCHOOL	7/2/99	980	38,211,000	38,991
P.S. 340 (@ WALTON HS)	X	10	NEW SCHOOL-MODULAR	8/9/99	652	21,119,000	32,391
P.S. 7 (NEW)	K	19	NEW SCHOOL	8/27/99	984	31,305,000	31,814
P.S. 360 KINGSBRIDGE TER@IS143	X	10	NEW SCHOOL-MODULAR	8/27/99	652	19,329,000	29,646
I.S. 254	X	10	NEW SCHOOL-MODULAR	8/31/99	608	20,896,000	34,368
EDWARD A REYNOLDS WEST SIDE HS	M	78	NEW SCHOOL-MODULAR	9/30/99	815	26,713,000	32,777
P.S. 161 (NEW 650 @ PS 57)	Q	28	NEW SCHOOL	4/17/00	838	31,100,000	37,112
P.S. 212 (FORMERLY JHJC)	Q	30	NEW SCHOOL	6/28/00	655	32,151,000	49,085
I.S. 230 (OLD J. H. HOSPITAL)	Q	30	NEW SCHOOL	7/21/00	753	29,777,000	39,544
P.S. 6 (P.S. 900)	R	31	NEW SCHOOL	8/31/00	955	39,542,000	41,405
MIDDLE COLLEGE HS (@MECC)	K	78	NEW SCHOOL	9/1/00	836	43,861,000	52,465
P.S. 228 ECC	Q	30	NEW SCHOOL	6/28/01	318	16,424,000	51,648
P.S. 242	Q	25	NEW SCHOOL	8/20/01	350	23,058,000	65,880
P.S 178	M	06	NEW SCHOOL	9/4/01	441	25,385,000	57,562
Total					**45,101**	**1,731,035,000**	**38,381**
Subtotals:			**Modular new schools**		**2,727**	**88,057,000**	**32,291**
			Replacement schools		**2,554**	**134,666,000**	**52,727**
			Building conversions		**1,010**	**8,720,000**	**8,634**
			Regular new schools		**38,810**	**1,499,592,000**	**38,639**

Source: EPP calculations from data provided by the School Construction Authority

Table 1A: The relationship between school size and construction cost per seat

	Seats	Cost	Cost/Seat
Average cost per seat of new schools with 228 to 600 seats (13 schools)	4,747	222,171,000	46,802
Average cost per seat of new schools with 601 to 1000 seats (26 schools)	20,610	775,829,000	37,643
Average cost per seat of new schools with 1001 to 2526 seats (11 schools)	16,180	589,649,000	36,443

Source: EPP calculations from data provided by the School Construction Authority
Excludes buiilding converstions and replacement schools

Table 2: Additions built by SCA, inception to 2001

School	B	D	Project Description	Completion date	Seats	Cost	Cost/seat
P.S. 199	Q	24	ADDITION	4/2/91	270	0	0
P.S. 62	Q	27	ADDITION	9/11/91	261	6,496,000	24,889
P.S. 64	Q	27	ADDITION	3/17/92	125	8,619,000	68,952
P.S. 119	X	08	ADDITION	6/30/92	0	6,598,000	undefined
P.S. 195	K	22	ADDITION AUDITORIUM	9/30/92	75	11,521,000	153,613
P.S. 15	Q	29	ADDITION	4/30/94	50	7,401,000	148,020
I.S. 246	K	17	ADDITION	8/30/94	480	17,328,000	36,100
P.S. 128	M	06	ADDITION	9/7/94	299	7,527,000	25,174
P.S. 314	K	20	ADDITION	9/27/94	266	9,356,000	35,173
P.S. 82	Q	28	ADDITION	9/30/94	240	13,866,000	57,775
P.S. 89	Q	24	ADDITION	6/15/95	400	27,281,000	68,203
P.S. 72	X	08	ADDITION LUNCHROOM	8/30/95	300	15,629,000	52,097
P.S. 153	M	06	ADDITION	9/1/95	300	9,023,000	30,077
P.S. 14	Q	24	ADDITION	1/31/96	350	16,115,000	46,043
P.S. 56	K	13	ADDITION AUDITORIUM	6/3/96	0	3,473,000	undefined
I.S. 145	Q	30	ADDITION	11/1/96	768	18,276,000	23,797
P.S. 88	Q	24	ADDITION	11/12/96	475	25,992,000	54,720
P.S. 2	Q	30	ADDITION-MODULAR	7/25/97	0	710,000	undefined
P.S. 130	K	15	FY96 RESO A MODULAR AI	8/15/97	120	1,089,000	9,075
P.S. 244	K	18	ADDITION	8/22/97	600	25,744,000	42,907
P.S. 21	R	31	ADDITION-MODULAR	8/25/97	240	2,169,000	9,038
P.S. 148	Q	30	ADDITION-MODULAR	8/29/97	450	6,021,000	13,380
P.S. 16 (@ Q721)	Q	24	ADDITION-MODULAR	9/2/97	330	3,730,000	11,303
P.S. 152	Q	30	ADDITION-MODULAR	12/12/97	491	7,134,000	14,530
P.S. 152	K	22	ADDITION/MOD	12/31/97	350	35,196,000	100,560
P.S. 139	Q	28	ADDITION-MODULAR	6/30/98	300	5,096,000	16,987
I.S. 93	Q	24	ADDITION-MODULAR	7/17/98	480	5,974,000	12,446
P.S. 33	Q	29	ADDITION-MODULAR	8/12/98	389	8,776,000	22,560
P.S. 35	Q	29	ADDITION-MODULAR	8/15/98	265	5,184,000	19,562
BUSHWICK HS	K	78	ADDITION-MODULAR	8/18/98	745	7,801,000	10,471
P.S. 113	Q	24	ADDITION-MODULAR	8/31/98	100	2,695,000	26,950
P.S. 102	X	12	ADDITION/MOD	9/8/98	250	40,983,000	163,932
P.S. 150	Q	30	ADDITION-MODULAR	9/25/98	375	6,487,000	17,299
P.S. 68	Q	24	ADDITION-MODULAR	2/11/99	510	7,381,000	14,473
I.S. 119	Q	24	ADDITION-MODULAR	3/7/99	540	9,180,000	17,000
P.S. 189	M	06	ADDITION-MODULAR	4/30/99	493	11,287,000	22,895
P.S. 120	Q	25	ADDITION	5/25/99	480	9,812,000	20,442
P.S. 97	Q	27	ADDITION-MODULAR	7/6/99	200	7,615,000	38,075
P.S. 114	K	18	ADDITION-MODULAR	7/8/99	473	12,151,000	25,689
P.S. 22	R	31	ADDITION-MODULAR	7/10/99	618	13,174,000	21,317
P.S. 138	Q	29	ADDITION-MODULAR	7/13/99	410	11,960,000	29,171
P.S. 135	Q	29	ADDITION-MODULAR	7/19/99	250	9,308,000	37,232
P.S. 229	Q	24	ADDITION-MODULAR	7/19/99	445	10,071,000	22,631
P.S. 149	Q	30	ADDITION-MODULAR	7/20/99	375	9,994,000	26,651
I.S. 210	Q	27	ADDITION-MODULAR	7/21/99	448	9,529,000	21,270
P.S. 117	Q	28	ADDITION-MODULAR	7/21/99	425	8,632,000	20,311
I.S. 234	K	22	ADDITION-MODULAR	7/29/99	527	12,421,000	23,569
P.S. 83 - MODULAR	X	11	MODULAR	7/29/99	692	13,219,000	19,103
P.S. 21	Q	25	ADDITION-MODULAR	8/2/99	360	9,421,000	26,169
P.S. 115	K	18	ADDITION	8/16/99	357	22,320,000	62,521
P.S. 20	R	31	ADDITION-MODULAR	8/26/99	150	3,016,000	20,107
J.H.S. 80/P.S. 280	X	10	ADDITION-MODULAR	11/30/99	493	10,488,000	21,274
P.S. 254	K	22	ADDITION-MODULAR	1/25/00	300	15,973,000	53,243
P.S. 107	Q	25	ADDITION-MODULAR	6/2/00	300	9,982,000	33,273
I.S. 226	Q	27	ADDITION-MODULAR	6/5/00	600	10,126,000	16,877
P.S. 63	Q	27	ADDITION-MODULAR	7/10/00	300	9,516,000	31,720
P.S. 44	R	31	ADDITION-MODULAR	7/11/00	180	3,494,000	19,411
P.S. 45	R	31	ADDITION-MODULAR	7/11/00	150	3,316,000	22,107
P.S. 153	Q	24	ADDITION-MODULAR	7/25/00	820	16,484,000	20,102
P.S. 230	K	15	ADDITION-MODULAR	8/3/00	150	4,609,000	30,727
P.S. 204	K	20	ADDITION-MODULAR	8/13/00	350	11,463,000	32,751
P.S. 279	K	18	ADDITION-MODULAR	11/27/00	505	11,690,000	23,149
P.S. 129	Q	25	ADDITION	8/7/01	320	16,591,000	51,847
P.S. 166	Q	30	ADDITION	8/20/01	360	16,849,000	46,803
P.S. 13	R	31	ADDITION	8/20/01	150	4,578,000	30,520
P.S. 39	R	31	ADDITION	8/20/01	150	4,587,000	30,580
Total					**23,025**	**709,527,000**	**30,816**
Total excluding project with zero cost					**22,755**	**709,527,000**	**31,181**
Subtotals			**Nonmodular additions**		**7,076**	**304,982,000**	**43,101**
			Modular additions		**15,349**	**328,366,000**	**21,393**

Source: EPP calculations from data provided by the School Construction Authority

Table 3: Additions/Modernizations built by the SCA, inception to 2001

School	B	D	Completion date	Seats	Cost	Cost/seat
P.S. 269	K	22	1/11/91	300	0	0
P.S. 249	K	17	8/22/91	300	0	0
P.S. 152	M	06	9/11/91	290	12,553,000	43,286
P.S. 173	M	06	9/11/91	300	11,971,000	39,903
I.S. 88 (WADLEIGH SCHOOL)	M	03	7/9/93	1,040	44,892,000	43,165
FT HAMILTON HS	K	78	9/30/93	0	35,897,000	undefined
PORT RICHMOND HS	R	78	11/16/96	824	45,370,000	55,061
P.S. 20	Q	25	1/29/97	515	23,289,000	45,221
P.S. 130	M	02	4/15/97	255	27,486,000	107,788
P.S. 69	Q	30	4/30/97	386	29,154,000	75,528
P.S. 224	K	19	9/1/97	243	20,642,000	84,947
P.S. 181	K	17	9/19/97	500	38,270,000	76,540
P.S. 233	K	18	11/15/97	400	19,961,000	49,903
REDIRECTION ALT HS	K	78	8/30/98	0	22,578,000	undefined
MAXWELL VOC HS	K	78	11/5/98	290	46,009,000	158,652
P.S. 217	K	22	12/31/98	298	32,058,000	107,577
Total				**5,941**	**410,130,000**	**69,034**
Total excluding projects with zero cost				**5,341**	**410,130,000**	**76,789**

Source: EPP calculations from data provided by the School Construction Authority

Table 4: Mini schools created by SCA, inception to 2001

School	B	D	Completion date	Seats	Cost	Cost/Seat
P.S. 11 MINISCHOOL	Q	30	10/6/90	300	4,398,000	14,660
P.S. 47 MINISCHOOL	Q	27	8/19/91	260	4,691,000	18,042
P.S. 169 MINISCHOOL	K	15	9/10/91	150	3,238,000	21,587
P.S. 235 MINISCHOOL	K	18	9/17/91	310	5,232,000	16,877
I.S. 125 MINISCHOOL	Q	24	2/28/92	390	4,634,000	11,882
P.S. 233 (@Q875)	Q	75	4/7/92	90	4,623,000	51,367
I.S. 73 MINISCHOOL	Q	24	5/22/92	540	5,712,000	10,578
P.S. 54 MINISCHOOL	Q	28	8/31/92	220	4,949,000	22,495
P.S. 55 MINISCHOOL	Q	28	9/17/92	250	5,572,000	22,288
Total				**2,510**	**43,049,000**	**17,151**

Source: EPP calculations from data provided by the School Construction Authority

Table 5: TCUs and TCBs built by SCA, inception to 2001

School	B	D	Completion date	Seats	Cost	Cost/seat
P.S. 19 - TRANSPORTABLE	Q	24	9/22/95	290	196,000	676
P.S. 106 - TRANSPORTABLE	X	11	10/2/95	174	0	0
P.S. 280/J.H.S. 80 - TRANSPORT	X	10	10/7/95	232	0	0
P.S. 96 - TRANSPORTABLE	X	11	10/7/95	174	0	0
P.S. 149 - TRANSPORTABLE X	Q	30	10/31/95	232	507,000	2,185
I.S. 61 - TRANSPORTABLE	Q	24	12/14/95	116	152,000	1,310
P.S. 13 - TRANSPORTABLE	Q	24	12/14/95	116	83,000	716
P.S. 81 - TRANSPORTABLE	Q	24	12/14/95	58	109,000	1,879
P.S. 229 - TRANSPORTABLE	Q	24	12/22/95	116	176,000	1,517
P.S. 102 - TRANSPORTABLE	Q	24	12/28/95	116	195,000	1,681
P.S. 117 - TRANSPORTABLE	Q	28	12/28/95	116	138,000	1,190
P.S. 120 - TRANSPORTABLE	Q	25	12/28/95	116	142,000	1,224
P.S. 129 - TRANSPORTABLE	Q	25	2/15/96	58	507,000	8,741
P.S. 91 - TRANSPORTABLE	Q	24	3/31/96	58	130,000	2,241
P.S. 95 - TRANSPORTABLE	Q	29	4/15/96	116	174,000	1,500
P.S. 124 - TRANSPORTABLE	Q	27	4/18/96	116	144,000	1,241
P.S. 131 - TRANSPORTABLE	Q	29	4/30/96	116	529,000	4,560
P.S. 121 - TRANSPORTABLE	Q	28	5/16/96	116	148,000	1,276
P.S. 35 - TRANSPORTABLE	Q	29	5/30/96	116	149,000	1,284
P.S. 143 - TRANSPORTABLE	Q	24	8/26/96	116	182,000	1,569
P.S. 153 - TRANSPORTABLE	Q	24	8/26/96	58	46,000	793
P.S. 153 - TRANSPORTABLE	Q	24	8/26/96	58	2,532,000	43,655
P.S. 17 - TRANSPORTABLE	Q	30	8/26/96	116	142,000	1,224
P.S. 195 - TRANSPORTABLE	Q	29	8/26/96	116	148,000	1,276
P.S. 33 - TRANSPORTABLE	Q	29	8/26/96	116	149,000	1,284
I.S. 77 - TRANSPORTABLE	Q	24	8/30/96	116	158,000	1,362
P.S. 272 - TRANSPORTABLE	K	18	8/30/96	174	306,000	1,759
P.S. 276 - TRANSPORTABLE	K	18	8/30/96	232	184,000	793
P.S. 11 - TRANSPORTABLE	Q	30	9/3/96	116	211,000	1,819
P.S. 13 - TRANSPORTABLE	Q	24	9/3/96	58	77,000	1,328
P.S. 229 - TRANSPORTABLE	Q	24	9/3/96	58	86,000	1,483
P.S. 24 - TRANSPORTABLE	Q	25	9/3/96	58	122,000	2,103
P.S. 25 (OL 4) - TRANSPORTABLE	R	75	9/3/96	116	14,000	121
P.S. 81 - TRANSPORTABLE	Q	24	9/3/96	58	81,000	1,397
P.S. 179 - TRANSPORTABLE	K	20	12/17/96	58	0	0
P.S. 179 - TRANSPORTABLE	K	20	1/6/97	116	325,000	2,802
P.S. 199 - TRANSPORTABLE	Q	24	1/29/97	116	199,000	1,716
P.S. 62 - TRANSPORTABLE	Q	27	2/11/97	58	134,000	2,310
P.S. 135 - TRANSPORTABLE X	Q	29	4/28/97	174	204,000	1,172
P.S. 38 - TRANSPORTABLE	Q	29	5/30/97	116	2,532,000	21,828
P.S. 129 - TRANSPORTABLE	Q	25	6/4/97	58	2,532,000	43,655
P.S. 17 - TRANSPORTABLE	Q	30	6/4/97	116	2,532,000	21,828
P.S. 153 - TRANSPORTABLE	Q	24	6/5/97	116	2,532,000	21,828
P.S. 196 - TRANSPORTABLE	Q	28	6/8/97	116	2,532,000	21,828
P.S. 120 - TRANSPORTABLE	Q	25	6/12/97	58	2,532,000	43,655
P.S. 24 - TRANSPORTABLE	Q	25	6/13/97	58	2,532,000	43,655
I.S. 77 - TRANSPORTABLE	Q	24	6/18/97	116	2,532,000	21,828
P.S. 70 - TRANSPORTABLE	Q	30	6/18/97	116	2,532,000	21,828
P.S. 91 - TRANSPORTABLE	Q	24	6/18/97	58	2,532,000	43,655
P.S. 143 - TRANSPORTABLE	Q	24	6/25/97	58	2,532,000	43,655
P.S. 81 - TRANSPORTABLE	Q	24	7/16/97	58	2,532,000	43,655
P.S. 91 - TRANSPORTABLE	Q	24	7/18/97	58	0	0
I.S. 125 - TRANSPORTABLE	Q	24	7/21/97	116	0	0
JOHN BOWNE - TRANSPORTABLE	Q	78	7/21/97	116	2,532,000	21,828
P.S. 29 - TRANSPORTABLE	Q	25	7/21/97	58	2,532,000	43,655
BRYANT HS - TRANSPORTABLE	Q	78	8/4/97	116	2,532,000	21,828
P.S. 12 - TRANSPORTABLE	Q	24	8/4/97	116	0	0
P.S. 16 - TRANSPORTABLE	X	11	8/15/97	116	108,000	931
P.S. 170 - TRANSPORTABLE	K	20	8/15/97	116	342,000	2,948
P.S. 214 - TRANSPORTABLE	K	19	8/15/97	290	471,000	1,624
P.S. 115 - TRANSPORTABLE	K	18	8/16/97	116	208,000	1,793
P.S. 96 - TRANSPORTABLE	X	11	8/16/97	232	283,000	1,220
P.S. 103 - TRANSPORTABLE SB	X	11	8/18/97	360	1,893,000	5,258
P.S. 105 - TRANSPORTABLE SB	X	11	8/18/97	480	1,903,000	3,965
P.S. 106 - TRANSPORTABLE	X	11	8/18/97	116	138,000	1,190

P.S. 121 - TRANSPORTABLE SB	X	11	8/18/97	180	1,581,000	8,783
P.S. 6 - TRANSPORTABLE	X	12	8/18/97	348	0	0
P.S. 68 - TRANSPORTABLE SB	X	11	8/18/97	300	1,436,000	4,787
P.S. 76 - TRANSPORTABLE SB	X	11	8/18/97	300	2,172,000	7,240
P.S. 89 - TRANSPORTABLE SB	X	11	8/18/97	300	1,042,000	3,473
P.S. 97 - TRANSPORTABLE SB	X	11	8/18/97	240	1,193,000	4,971
AUX SERVICES - TRANSPORTABLE	Q	78	8/20/97	58	344,000	5,931
P.S. 139 - TRANSPORTABLE	Q	28	8/20/97	116	0	0
P.S. 206 - TRANSPORTABLE	Q	28	8/20/97	116	0	0
CARDOZO HS - TRANSPORTABLE	Q	78	8/22/97	116	307,000	2,647
ENY FAMILY ACAD -TRANSPORTABLE	K	78	8/22/97	232	417,000	1,797
FRANCIS LEWIS - TRANSPORTABLE	Q	78	8/22/97	116	375,000	3,233
P.S. 100 - TRANSPORTABLE	Q	27	8/22/97	116	0	0
P.S. 104 - TRANSPORTABLE SB	X	85	8/22/97	58	181,000	3,121
P.S. 114 - TRANSPORTABLE	K	18	8/22/97	232	141,000	608
P.S. 140 - TRANSPORTABLE	Q	28	8/22/97	116	263,000	2,267
P.S. 156 - TRANSPORTABLE	Q	29	8/22/97	116	262,000	2,259
P.S. 160 - TRANSPORTABLE	Q	28	8/22/97	116	263,000	2,267
P.S. 163 - TRANSPORTABLE	X	09	8/22/97	116	205,000	1,767
P.S. 19 - TRANSPORTABLE	K	14	8/22/97	116	337,000	2,905
P.S. 202 - TRANSPORTABLE	K	19	8/22/97	232	439,000	1,892
P.S. 209 - TRANSPORTABLE	K	21	8/22/97	116	342,000	2,948
P.S. 276 - TRANSPORTABLE	K	18	8/22/97	116	130,000	1,121
P.S. 28 - TRANSPORTABLE	X	09	8/22/97	58	180,000	3,103
P.S. 290 - TRANSPORTABLE	K	19	8/22/97	58	131,000	2,259
P.S. 30 - TRANSPORTABLE	Q	28	8/22/97	116	0	0
P.S. 48 - TRANSPORTABLE	Q	28	8/22/97	58	0	0
P.S. 54 - TRANSPORTABLE	Q	28	8/22/97	58	2,532,000	43,655
P.S. 55 - TRANSPORTABLE	Q	28	8/22/97	174	394,000	2,264
P.S. 64 - TRANSPORTABLE	X	85	8/22/97	116	181,000	1,560
P.S. 94 - TRANSPORTABLE	X	10	8/22/97	116	356,000	3,069
RICHMOND HILL - TRANSPORTABLE	Q	78	8/22/97	116	0	0
SOUTH BRONX - TRANSPORTABLE	X	78	8/22/97	116	438,000	3,776
STEVENSON - TRANSPORTABLE	X	78	8/22/97	116	0	0
J F KENNEDY HS - TRANSPORTABLE	X	78	8/25/97	116	539,000	4,647
MORRIS HS - TRANSPORTABLE	X	78	8/25/97	116	837,000	7,216
P.S. 112 - TRANSPORTABLE	K	20	8/25/97	58	2,532,000	43,655
P.S. 123 - TRANSPORTABLE	Q	27	8/25/97	116	0	0
P.S. 193 - TRANSPORTABLE	K	22	8/25/97	58	2,532,000	43,655
P.S. 211 - TRANSPORTABLE	X	12	8/25/97	232	343,000	1,478
P.S. 95 - TRANSPORTABLE	K	21	8/25/97	174	2,532,000	14,552
GEORGE WASHINGTON-TRANSPORT.	M	85	8/29/97	870	3,000,000	3,448
JANE ADDAMS VOC HS	X	78	8/29/97	174	0	0
MORRIS HS - TRANSPORTABLE	X	78	8/29/97	116	616,000	5,310
P.S. 279 - TRANSPORTABLE	K	18	8/29/97	232	463,000	1,996
P.S. 276 - TRANSPORTABLE	K	18	4/10/98	116	0	0
P.S. 189 - TRANSPORTABLE	K	17	4/13/98	116	1,280,000	11,034
P.S. 63 - TRANSPORTABLE	Q	27	4/13/98	116	215,000	1,853
P.S. 183 - TRANSPORTABLE	K	23	4/22/98	58	0	0
P.S. 62 - TRANSPORTABLE	Q	27	6/24/98	58	0	0
P.S. 188 - TRANSPORTABLE	K	21	7/17/98	58	0	0
P.S. 253 - TRANSPORTABLE	K	21	7/17/98	58	0	0
P.S. 329 - TRANSPORTABLE	K	21	7/17/98	174	0	0
P.S. 208 - TRANSPORTABLE	K	18	8/8/98	116	0	0
I.S. 136 - TRANSPORTABLE	K	85	8/9/98	240	0	0
I.S. 302 - TRANSPORTABLE	K	19	8/19/98	58	0	0
P.S. 219 - TRANSPORTABLE	K	18	8/23/98	58	0	0
J.H.S. 117 - TRANSPORTABLE	X	09	8/24/98	116	0	0
P.S. 108 - TRANSPORTABLE	X	11	8/24/98	232	415,000	1,789
P.S. 14 - TRANSPORTABLE	X	08	8/24/98	116	0	0
P.S. 71 - TRANSPORTABLE	X	08	8/24/98	116	0	0
P.S. 87 - TRANSPORTABLE	X	11	8/24/98	232	345,000	1,487
P.S. 108 - TRANSPORTABLE	Q	27	8/26/98	116	1,280,000	11,034
P.S. 12 - TRANSPORTABLE	Q	24	8/26/98	58	0	0
P.S. 85 - TRANSPORTABLE	Q	30	8/26/98	232	0	0
I.S. 82 - TRANSPORTABLE	X	85	8/28/98	116	0	0
P.S. 163 - TRANSPORTABLE	X	09	8/28/98	116	307,000	2,647
P.S. 34 - TRANSPORTABLE	Q	29	8/30/98	116	0	0

I.S 118 - TRANSPORTABLE SB	X	10	8/31/98	240	2,391,000	9,963
P.S. 15 - TRANSPORTABLE	Q	29	8/31/98	116	0	0
P.S. 177 - TRANSPORTABLE	Q	75	8/31/98	100	0	0
P.S. 20 - TRANSPORTABLE SB	X	10	8/31/98	300	2,391,000	7,970
P.S. 373 SP. ED. (@R040)	R	75	8/31/98	96	0	0
P.S. 9 - TRANSPORTABLE	X	10	8/31/98	240	2,391,000	9,963
P.S. 77 - TCB	X	12	9/1/98	272	11,954,000	43,949
P.S. 232 - TRANSPORTABLE	Q	27	9/2/98	116	1,280,000	11,034
P.S. 111 - TRANSPORTABLE SB	X	11	12/28/98	540	4,782,000	8,856
P.S. 121 - TRANSPORTABLE	Q	28	7/15/99	58	0	0
P.S. 146 - TRANSPORTABLE	Q	27	7/15/99	58	0	0
P.S. 66 - TRANSPORTABLE	Q	27	7/25/99	58	0	0
P.S. 96 - TRANSPORTABLE	Q	27	7/25/99	58	0	0
P.S. 119 - TRANSPORTABLE	X	08	8/4/99	116	0	0
P.S. 138 - TRANSPORTABLE	X	08	8/4/99	116	0	0
QUEENS COLLEGE ELEMENTARY	Q	78	8/19/99	174	0	0
P.S. 193 - TRANSPORTABLE	K	22	8/20/99	58	0	0
P.S. 194 - TRANSPORTABLE	K	22	8/20/99	58	0	0
P.S. 198 - TRANSPORTABLE	K	22	8/20/99	116	0	0
P.S. 235 - TRANSPORTABLE	K	18	8/20/99	232	0	0
P.S. 236 - TRANSPORTABLE	K	22	8/20/99	116	0	0
P.S. 268 - TRANSPORTABLE	K	18	8/20/99	58	0	0
P.S. 97 - TRANSPORTABLE	K	21	8/20/99	116	0	0
P.S. 214 - TRANSPORTABLE	K	19	8/21/99	58	0	0
P.S. 40 - TRANSPORTABLE	Q	85	8/21/99	174	640,000	3,678
P.S. 77 - TCB	X	12	8/27/99	330	0	0
P.S. 163 - TRANSPORTABLE	M	03	9/1/99	116	1,280,000	11,034
P.S. 212 - TRANSPORTABLE	K	21	9/7/99	116	0	0
RICHMOND HILL - TRANSPORTABLE	Q	78	1/28/00	406	1,280,000	3,153
P.S. 230 - TRANSPORTABLE	K	15	2/9/00	116	1,280,000	11,034
J.H.S. 217 - TRANSPORTABLE SB	Q	28	6/26/00	330	2,438,000	7,388
BRYANT HS - TRANSPORTABLE	Q	78	7/17/00	58	1,280,000	22,069
JOHN BOWNE - TRANSPORTABLE	Q	78	7/17/00	116	1,280,000	11,034
I.S. 125 - TRANSPORTABLE	Q	24	7/30/00	116	1,280,000	11,034
P.S. 132 - TRANSPORTABLE	Q	29	7/30/00	116	1,280,000	11,034
P.S. 52 - TRANSPORTABLE	Q	29	7/30/00	116	1,280,000	11,034
P.S. 56 - TRANSPORTABLE	Q	27	7/30/00	58	1,280,000	22,069
P.S. 96 - TRANSPORTABLE	X	11	8/3/00	232	1,280,000	5,517
P.S. 97 - TRANSPORTABLE	X	11	8/3/00	232	1,280,000	5,517
I.S. 302 - TRANSPORTABLE	K	19	8/4/00	116	1,280,000	11,034
P.S. 159 - TRANSPORTABLE	K	19	8/4/00	116	0	0
P.S. 92 - TRANSPORTABLE	Q	30	8/9/00	116	0	0
P.S. 152 - TRANSPORTABLE	K	22	8/17/00	116	0	0
P.S. 163 - TRANSPORTABLE	Q	25	8/17/00	116	1,280,000	11,034
P.S. 207 - TRANSPORTABLE	K	22	8/17/00	116	0	0
P.S. 29 - TRANSPORTABLE	Q	25	8/17/00	58	1,280,000	22,069
CARDOZO HS - TRANSPORTABLE	Q	78	9/1/00	116	0	0
P.S. 11 - TRANSPORTABLE	Q	30	9/1/00	116	0	0
P.S. 174 - TRANSPORTABLE	Q	28	9/8/00	116	0	0
P.S. 308 - TRANSPORTABLE	K	16	1/24/01	58	199,000	3,431
P.S. 41 - TRANSPORTABLE	Q	26	8/27/01	116	525,000	4,526
JOHN ADAMS HS - TRANSPORTABLE	Q	78	8/30/01	290	704,000	2,428
P.S. 173 - TRANSPORTABLE	Q	26	8/30/01	116	363,000	3,129
Total				**25,902**	**132,961,000**	**5,133**

Source: EPP calculations from data provided by the School Construction Authority

Table 6: Lease alterations/design work conducted by SCA, inception to 2001

School	B	D	Completion date	Seats	Cost	Cost/seat
COALITION CAMPUS HS	M	78	11/30/94	600	0	0
NYC PS REPERTORY CO -TOWN HALL	M	78	10/15/96	200	1,575,000	7,875
ACORN H.S. (GRAND AVE.)	K	78	7/3/96	807	0	0
P.S. 65	Q	27	9/4/96	582	0	0
EBC HS FOR PUBLIC SERV BUSHWIC	K	78	8/28/98	528	197,000	373
I.S. 120-LEASED FACILITY @M838	M	06	10/1/96	630	0	0
HEALTH OPPORTUNITIES H.S.	X	78	4/10/96	1,113	0	0
RENAISSANCE CHARTER SCHOOL	Q	78	9/5/96	640	395,000	617
FANNY LOU HAMER FREEDOM H.S.	X	78	10/4/95	380	0	0
WINGS ACADEMY	X	78	9/7/95	500	0	0
Total				5,980	2,167,000	362

Source: EPP calculations from data provided by the School Construction Authority

Table 7: Other projects, atheletic fields, modernizations, and site work, built by SCA, inception to 2001

School	B	D	Project Description	Completion date	Seats	Cost	Cost/Seat
ERASMUS HALL AF	K	78	ATHLETIC FIELD	9/27/93	0	4,875,000	-
MIDWOOD AF (MAIN)	K	78	ATHLETIC FIELD	6/30/92	0	2,596,000	-
GEORGE WASHINGTON AF	M	78	ATHLETIC FIELD	9/28/90	0	1,319,000	-
CLEVELAND AF NO. 1	Q	78	ATHLETIC FIELD	6/24/91	0	5,286,000	-
FLUSHING AF (LEVITTS FIELD)	Q	78	ATHLETIC FIELD	11/30/91	0	7,066,000	-
FRANKLIN K. LANE AF	Q	78	ATHLETIC FIELD	4/19/91	0	3,577,000	-
AUGUST MARTIN AF	Q	78	ATHLETIC FIELD	1/30/91	0	3,915,000	-
CURTIS AF	R	78	ATHLETIC FIELD	12/3/91	0	4,379,000	-
TOTTENVILLE AF	R	78	ATHLETIC FIELD	5/15/92	0	7,150,000	-
CLINTON AF	X	78	ATHLETIC FIELD	12/31/91	0	5,164,000	-
COLUMBUS AF	X	78	ATHLETIC FIELD	1/31/92	0	2,389,000	-
LEHMAN HS	X	78	ATHLETIC FIELD	3/31/93	0	4,437,000	-
SMITH H.S.	X	78	ATHLETIC FIELD	11/30/91	0	0	-
AUGUST MARTIN AF	Q	78	FIELD HOUSE/BLEACHER	8/20/92	0	2,306,000	-
P.S. 20	R	31	PLAYGROUND	6/30/95	0	399,000	-
P.S. 54	R	31	PLAYGROUND	6/30/95	0	733,000	-
AUTOMOTIVE TRDS VOC HS	K	78	MOD - 7 SHOPS	12/31/91	0	5,561,000	-
CLARA BARTON HS	K	78	MOD - EXTERIOR	1/15/93	0	6,884,000	-
MADISON HS	K	78	MOD - EXTERIOR	6/10/95	0	10,332,000	-
OLD BOYS (ALT. PROGRAMS)	K	78	MOD - EXTERIOR	2/27/96	0	7,146,000	-
P.S. 171	M	04	MOD - EXTERIOR	1/6/92	0	4,849,000	-
P.S. 9 (OLD 115)	X	10	MOD - EXTERIOR	12/11/93	0	3,952,000	-
NORTH EAST BRONX ED PARK	X	11	MOD - HVAC	8/31/93	0	17,105,000	-
TRUMAN H.S.	X	78	MOD - HVAC	3/31/92	0	4,477,000	-
OLD BOYS (ALT. PROGRAMS)	K	78	MOD - INTERIOR	1/31/99	0	31,022,000	-
TELECOM ARTS & TECHNOLOGY H.	K	78	MOD - KITCHEN	9/12/94	0	1,764,000	-
I.S. 17 (MNHT ACADEMY OF TECH)	M	02	MOD - PHASE I	2/15/93	0	1,232,000	-
P.S. 75	K	32	MODERNIZATION	9/30/96	0	12,429,000	-
P.S. 107	K	15	MODERNIZATION	9/30/94	0	9,067,000	-
P.S. 132	K	14	MODERNIZATION	10/30/97	0	18,952,000	-
P.S. 190	K	19	MODERNIZATION	8/30/97	0	17,989,000	-
P.S. 205	K	20	MODERNIZATION	10/30/95	0	9,724,000	-
P.S. 370	K	75	MODERNIZATION	2/28/96	0	11,641,000	-
ERASMUS HALL HS	K	78	MODERNIZATION	2/9/00	0	102,861,000	-
SARAH J HALE VOC HS	K	78	MODERNIZATION	4/30/94	0	26,251,000	-
PROSPECT HEIGHTS HS	K	78	MODERNIZATION	4/30/98	0	41,791,000	-
ROBESON HS COMP&BUS TC (A HM	K	78	MODERNIZATION	3/20/98	0	31,632,000	-
TELECOM ARTS & TECHNOLOGY H.	K	78	MODERNIZATION	6/30/93	0	27,569,000	-
TILDEN HS	K	78	MODERNIZATION	10/31/94	0	26,374,000	-
E NY HS OF TRANSIT TECHNOLOGY	K	78	MODERNIZATION	8/30/93	0	33,599,000	-
I.S. 52	M	06	MODERNIZATION	2/1/93	0	15,325,000	-
P.S. 53 (AKA PS 8)	M	75	MODERNIZATION	8/30/96	0	10,914,000	-
P.S. 98	M	06	MODERNIZATION	12/12/97	0	16,093,000	-
P.S. 158	M	02	MODERNIZATION	11/15/92	0	7,861,000	-
P.S. 166	M	03	MODERNIZATION	12/30/97	0	18,476,000	-
RANDOLPH HS	M	78	MODERNIZATION	8/30/91	0	16,884,000	-
CO-OP TECHNICAL H.S.	M	78	MODERNIZATION	9/1/97	0	47,855,000	-
LIBERTY ALT HS	M	78	MODERNIZATION	8/22/96	0	9,102,000	-
JK ONNASIS HS - INT'L CAREERS	M	78	MODERNIZATION	9/15/92	580	22,259,000	38,378
P.S. 16 (@ Q721)	Q	24	MODERNIZATION	9/8/98	747	25,211,000	33,750
P.S. 50	Q	28	MODERNIZATION	5/6/94	0	8,753,000	-
P.S. 70	Q	30	MODERNIZATION	4/19/95	0	11,518,000	-
I.S. 125	Q	24	MODERNIZATION	5/22/97	0	23,880,000	-
P.S. 131	Q	29	MODERNIZATION	5/30/94	0	5,276,000	-
P.S. 752/CAREER DEV. @ IS 142	Q	75	MODERNIZATION	2/28/93	0	14,335,000	-
BAYSIDE HS	Q	78	MODERNIZATION	9/30/92	0	27,133,000	-
RALPH MCKEE VOCATIONAL H.S.	R	78	MODERNIZATION	3/31/92	0	18,026,000	-
P.S. 12	X	75	MODERNIZATION	2/15/92	0	6,155,000	-
I.S. 84 (@X084)	X	75	MODERNIZATION	5/30/92	0	4,469,000	-
J.H.S. 117	X	09	MODERNIZATION	8/31/94	0	17,803,000	-
JANE ADDAMS VOC HS	X	78	MODERNIZATION	6/15/00	0	43,700,000	-
CLINTON HS	X	78	MODERNIZATION	2/18/93	0	34,343,000	-
COLUMBUS HS	X	78	MODERNIZATION	6/30/92	0	30,324,000	-
GOMPERS VOC HS	X	78	MODERNIZATION	3/30/92	0	14,431,000	-
MORRIS HS	X	78	MODERNIZATION	9/1/97	0	52,239,000	-
TAFT HS	X	78	MODERNIZATION	2/18/93	0	25,570,000	-
WALTON HS	X	78	MODERNIZATION	9/1/97	0	53,993,000	-
MADISON HS	K	78	LOCKER ROOMS	9/15/93	0	0	-
TELECOM ARTS & TECHNOLOGY H.	K	78	BOILER CONVERSION	4/30/95	0	2,729,000	-
TELECOM ARTS & TECHNOLOGY H.	K	78	LYFE CENTER	9/9/94	0	577,000	-
P.S. 186 (@ X136)	X	75	SPEC ED ENHANCEMENT	4/30/92	0	6,217,000	-
P.S. 754 (AKA JS 155)	X	75	SPEC ED ENHANCEMENT	7/31/92	0	6,490,000	-
MIDWOOD HS	K	78	WINDOW RESTORATION	11/30/94	0	1,650,000	-
MIDWOOD HS	K	78	LOW VOLTAGE SYSTEM	5/30/97	0	1,674,000	-
P.S./I.S. 156	K	23	DEMOLITION	5/19/00	0	3,178	-
TOWNSEND HARRIS H.S.	Q	78	SITE WORK	8/2/91	0	0	-
Total					**1,327**	**1,121,062,178**	**844,809**
Sutotal			**Projects increasing seats**		**1,327**	**47,470,000**	**35,772**

Source: EPP calculations from data provided by the School Construction Authority

Table 8: Summary of SCA projects, inception to 2001			
Project Description	**Seats**	**Cost**	**Cost/Seat**
New schools	45,101	1,731,035,000	38,381
Additions	23,025	709,527,000	30,816
Additions/modernizations	5,941	410,130,000	69,034
Mini schools	2,510	43,049,000	17,151
Subtotal (permanent projects)	**76,577**	**2,893,741,000**	**37,789**
TCUs / TCBs	25,902	132,961,000	5,133
Total school construction projects	**102,479**	**3,026,702,000**	**29,535**

Table 8B: Other SCA projects	Seats	Cost	Cost/Seat
Lease alterations	5,980	2,167,000	362
Modernizations, athletic fields, site work	1,327	1,121,062,178	844,809
Total seats created by SCA inception to 2001	**109,786**	**4,149,931,178**	**37,800**

Source: EPP calculations from data provided by the School Construction Authority

Chart 8A: Number of seats created by SCA by type of project, inception to 2001
(Excludes modernizations, alterations, and other projects not designed to increase capacity)
Source: EPP calculations from data provided by the School Construction Authority

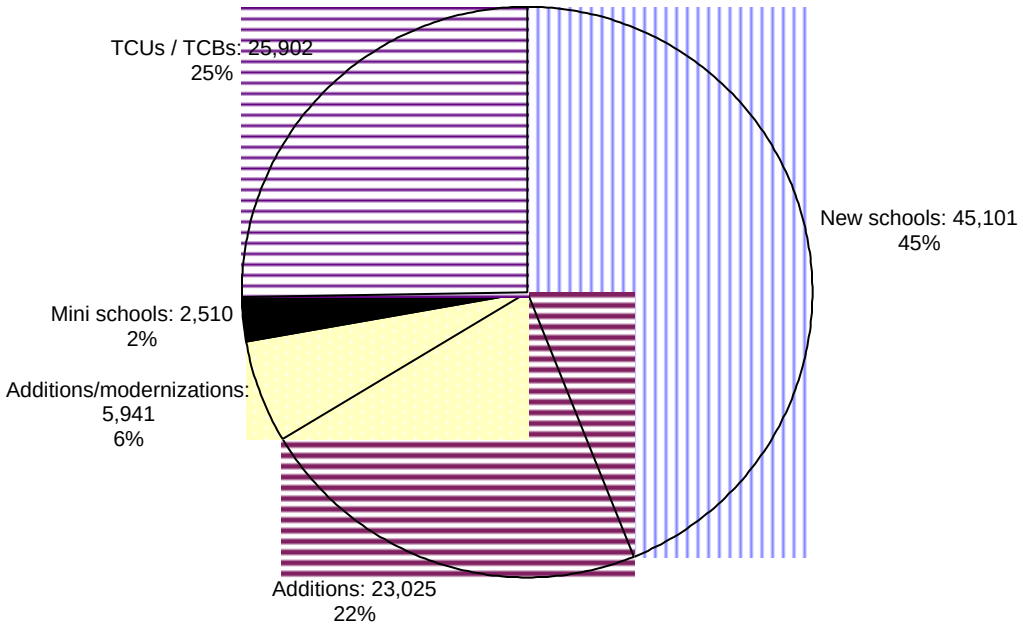


Chart 8B: SCA Spending by type of construction project in millions of dollars, inception to 2001
Source: EPP calculations from data provided by the School Construction Authority

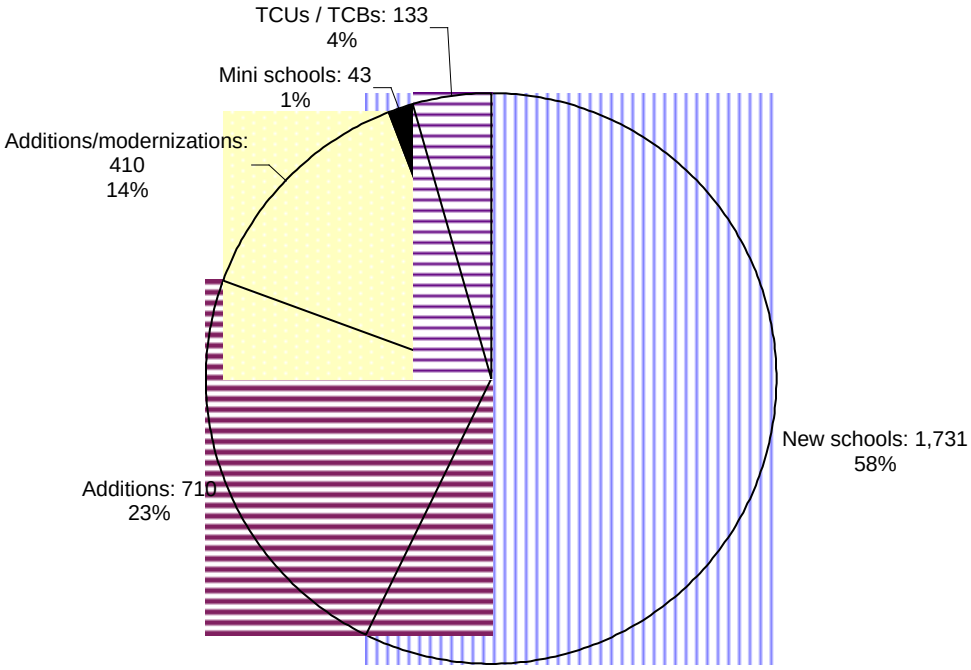
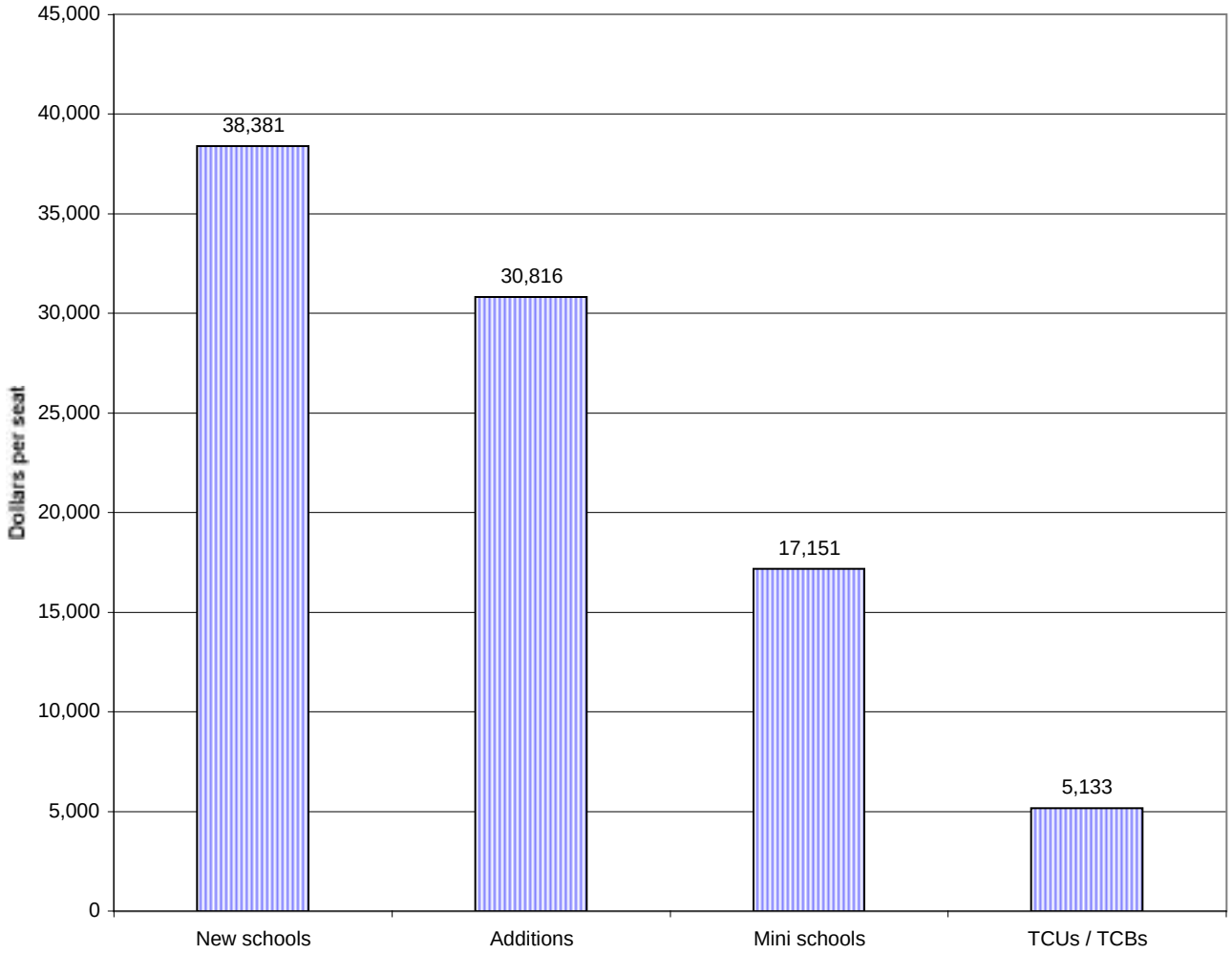


Chart 8C: Cost per seat of various types of SCA projects



Source: EPP calculations from data provided by the School Construction Authority

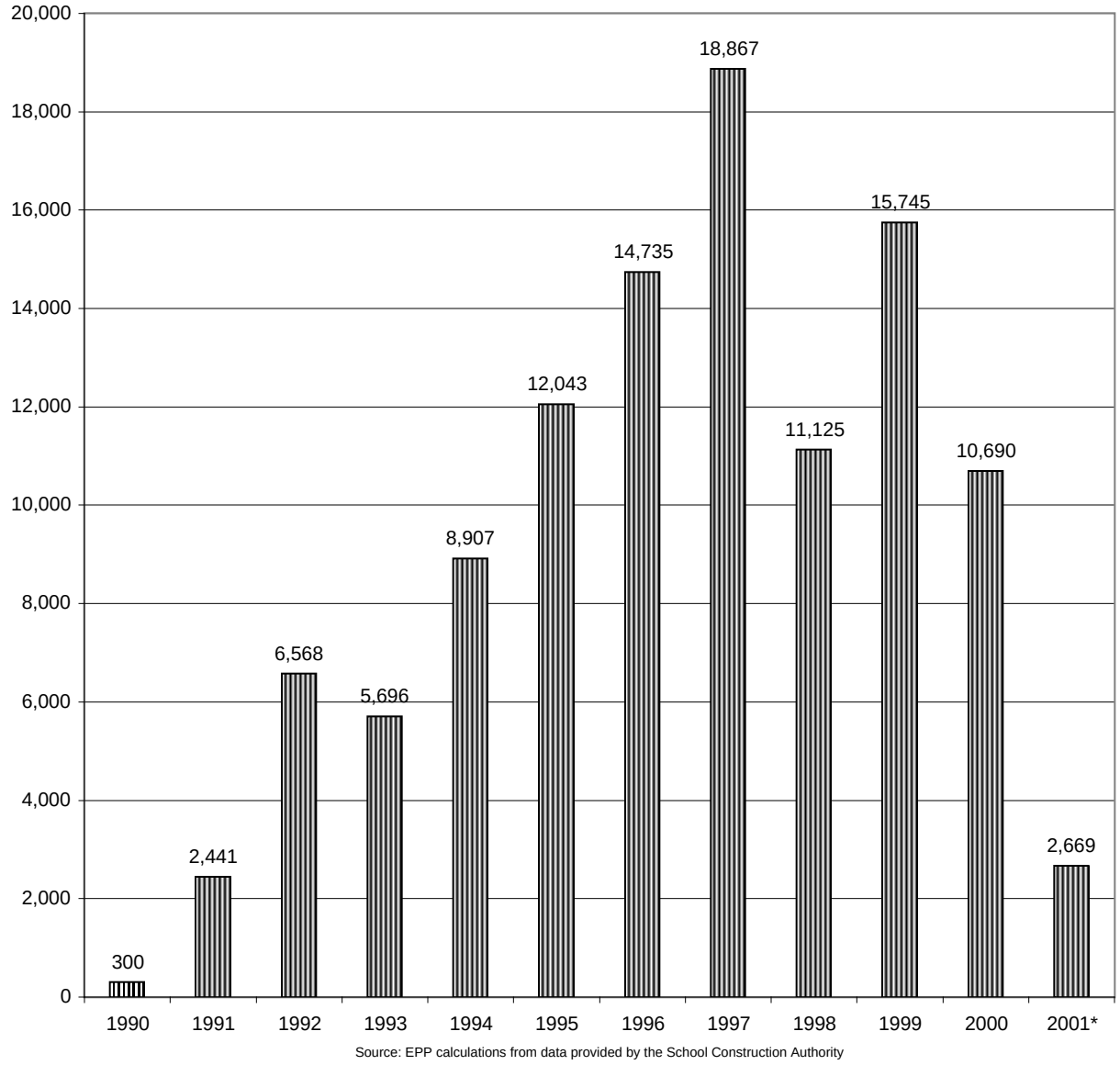
Table 9: Seats created by SCA, all construction projects by year of completion, 1990 to 2001

Calendar Year	Seats	Spending	Spending per seat
1990	300	4,398,000	14,660
1991	2,441	44,181,000	18,100
1992	6,568	205,416,000	31,275
1993	5,696	224,081,000	39,340
1994	8,907	269,671,000	30,276
1995	12,043	369,103,000	30,649
1996	14,735	385,168,000	26,140
1997	18,867	449,687,000	23,835
1998	11,125	264,632,000	23,787
1999	15,745	389,321,000	24,727
2000	10,690	292,162,000	27,330
2001*	2,669	109,263,000	40,938
Total	109,786	3,007,083,000	27,390

Source: EPP calculations from data provided by the School Construction Authority

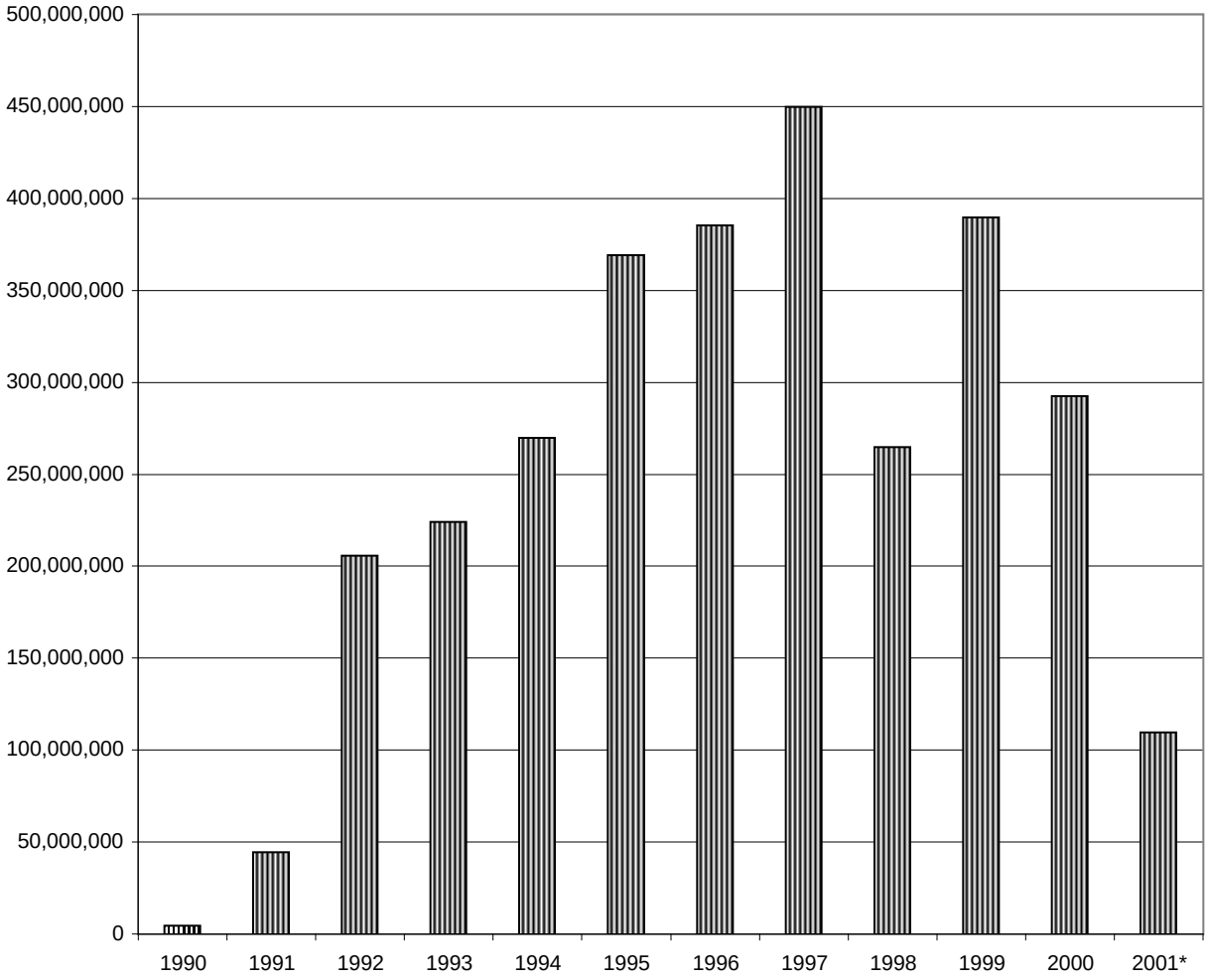
*Thru October, 2001

Chart 9A: Seats created by SCA by year of completion



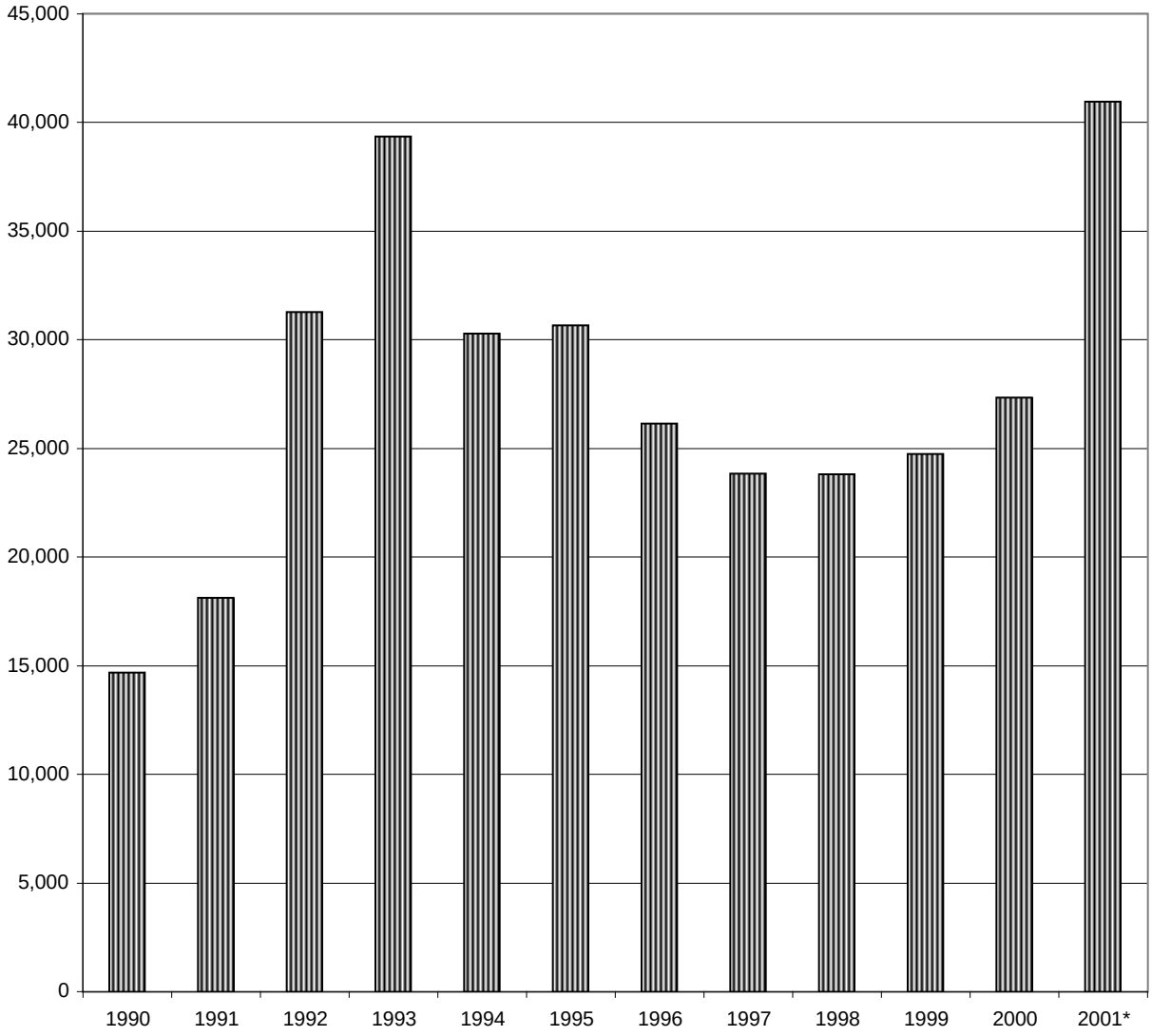
Source: EPP calculations from data provided by the School Construction Authority

Chart 9B: Spending on SCA projects by year of completion



Source: EPP calculations from data provided by the School Construction Authority
*Thru October 2001

Chart 9C: Average spending per seat by year of completion



Source: EPP calculations from data provided by the School Construction Authority
*Thru October 2001

Table 10: Changes in the school construction and cost per seat over time

Table 10A: New Schools created by SCA, by year of completion, inception to 2001 (does not include replacement schools or building conversions.)

Year	Number of schools	Seats	Spending	Cost/seat
1992	4	4,298	137,527,000	31,998
1993	6	4,006	151,693,000	37,866
1994	6	6,972	214,193,000	30,722
1995	7	7,007	286,099,000	40,830
1996	7	5,776	256,640,000	44,432
1997	3	1,473	64,647,000	43,888
1998	2	1,546	49,130,000	31,779
1999	7	8,405	284,682,000	33,871
2000	5	4,037	176,431,000	43,703
2001	3	1,109	64,867,000	58,491
Total	50	44,629	1,685,909,000	37,776

Excludes building conversions and replacement schools

Table 10B: New schools completed 1992-1996 and 1996-2001

Period	Number of schools	Seats	Spending	Cost/seat
92-96	30	28,059	1,046,152,000	37,284
97-01	20	16,570	639,757,000	38,609
Percentage change	-33.33%	-40.95%	-38.85%	3.55%

Excludes building conversions and replacement schools

Table 10C: Cost per seat of new schools completed during each capital plan

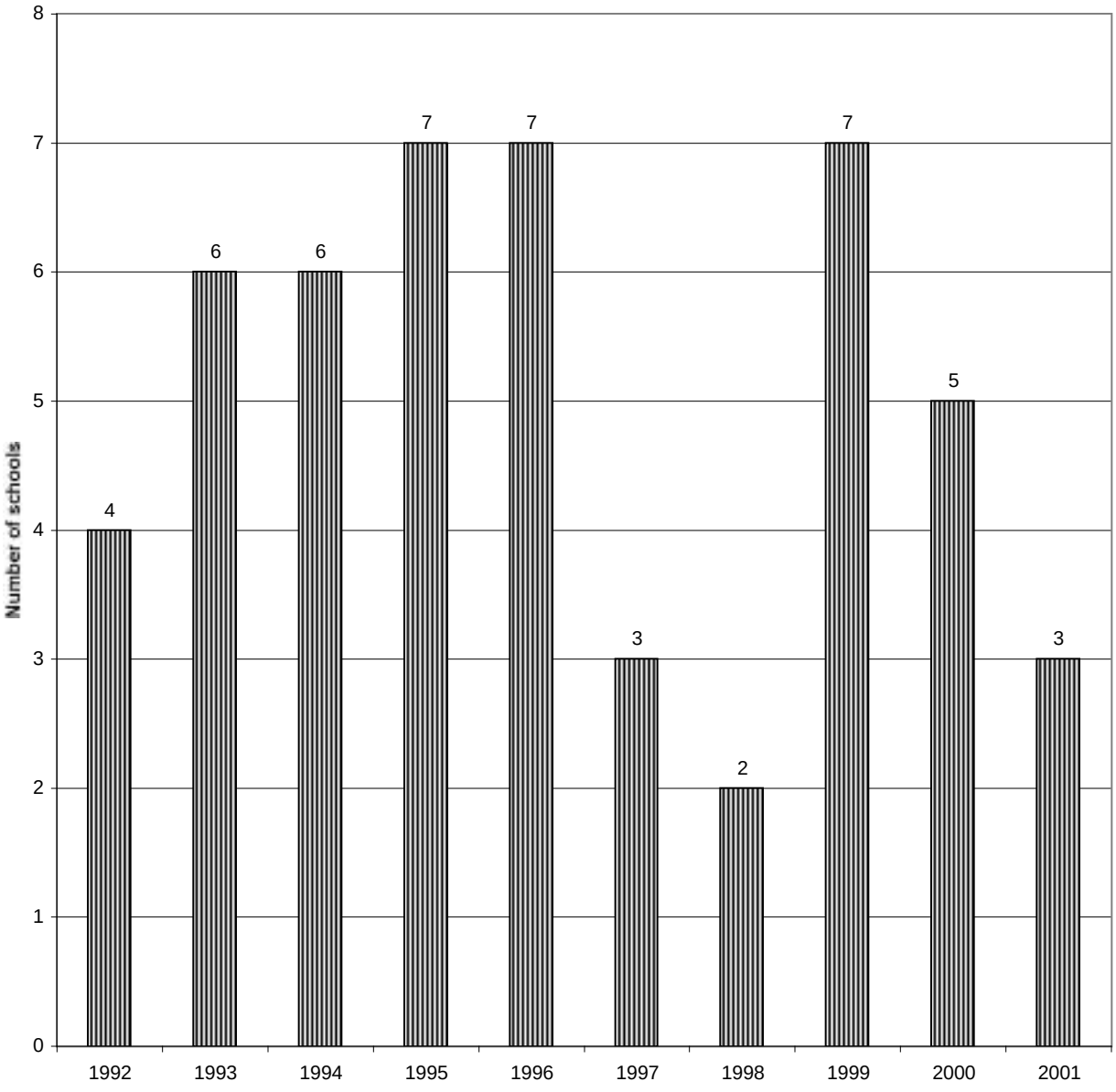
School	Number of Schools	Seats	Spending	Cost/Seat
1st capital plan (7/1/89 - 6/30/94)	12	10,476	356,468,000	34,027
2nd capital plan (7/1/94 - 6/30/99)	24	21,224	832,310,000	39,216
3rd capital plan (7/1/99 - 10/1/01*)	14	9,837	398,871,000	40,548

* The capital plan runs through 2004, but data is complete only through October, 2001

Excludes building conversions and replacement schools

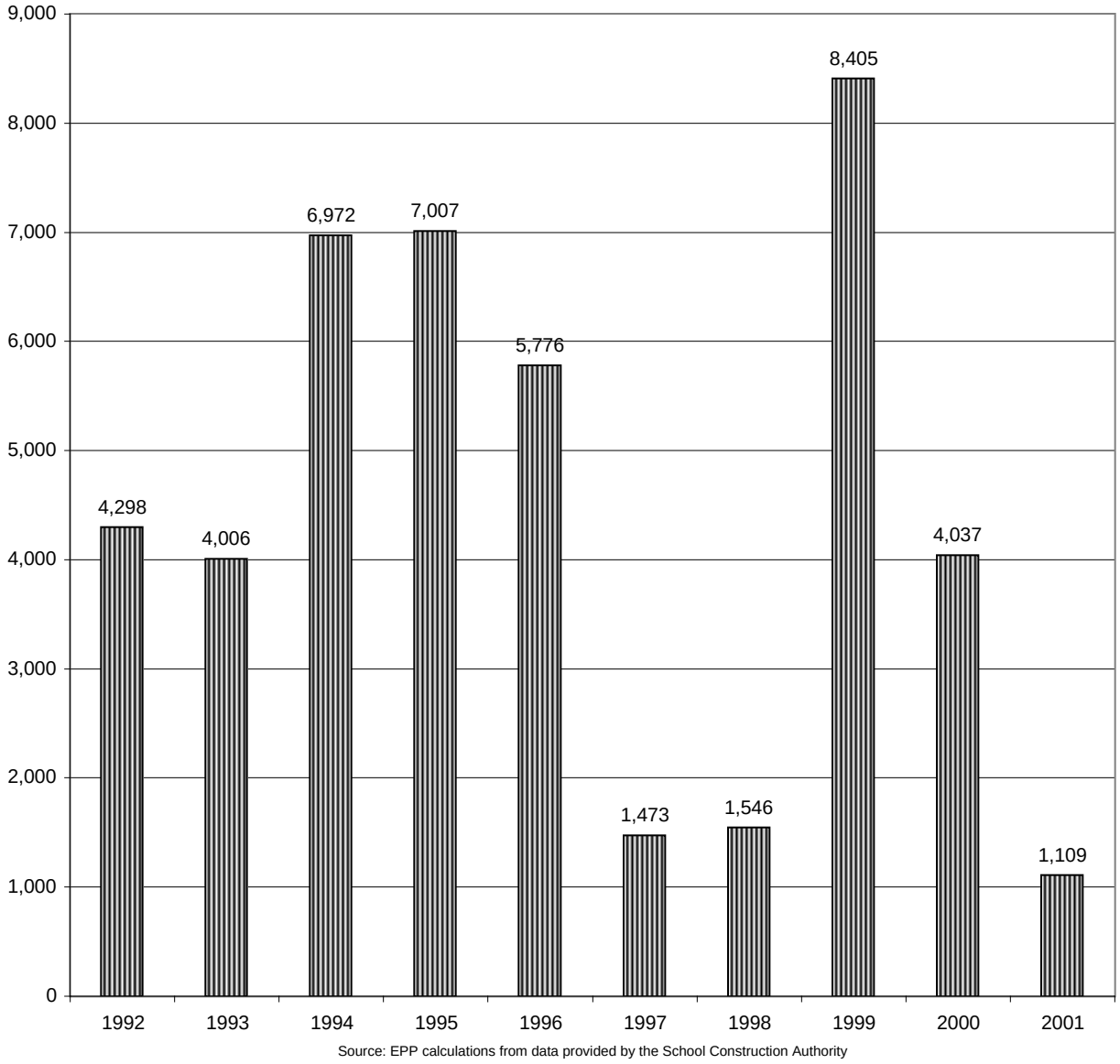
Source: EPP calculations from data provided by the School Construction Authority

Chart 10A: New Schools by year of completions, inception of SCA to 2001



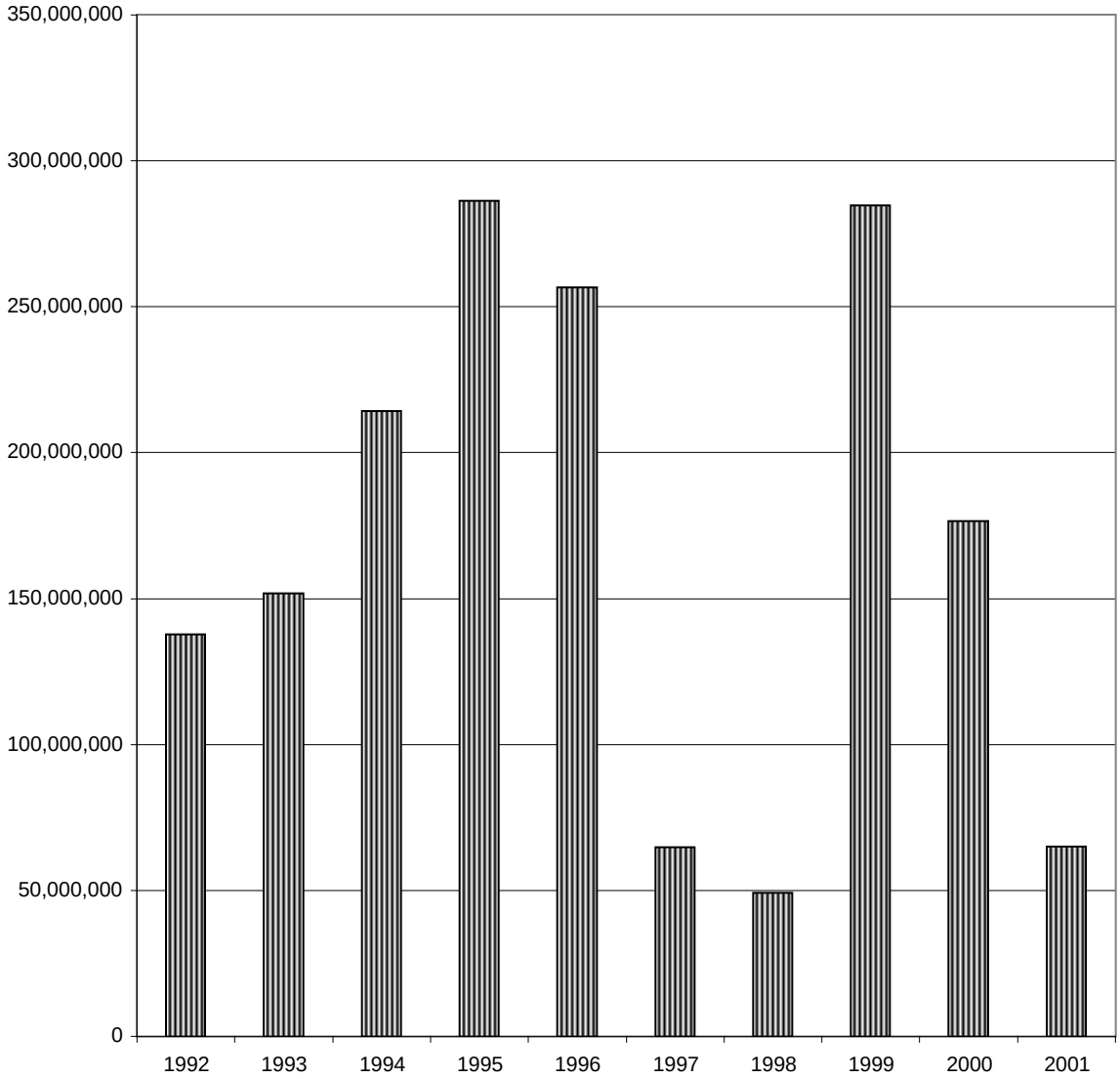
Source: EPP calculations from data provided by the School Construction Authority

Chart 10B: Number of seats in new schools completed each year by SCA, inception to 2001



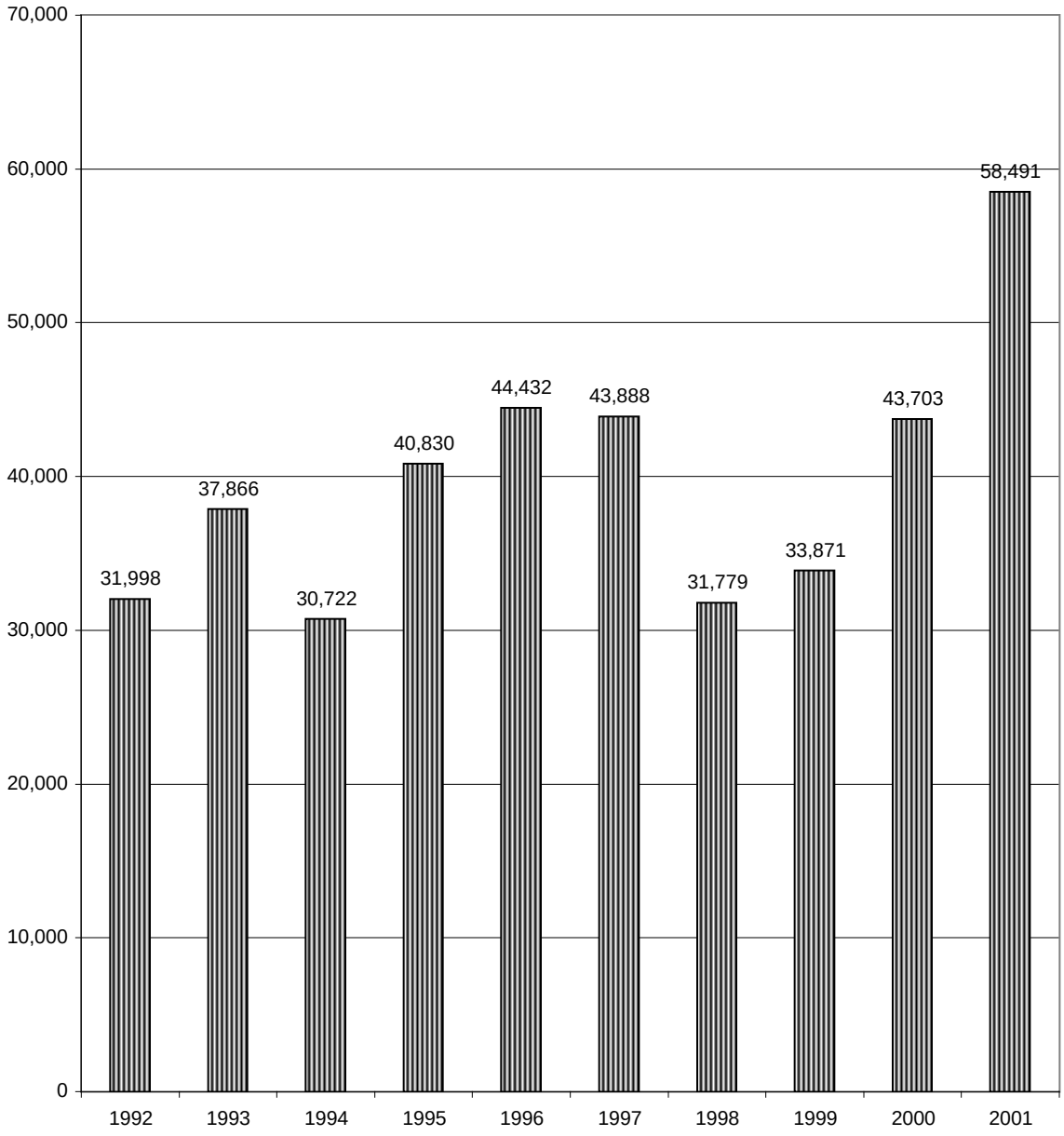
Source: EPP calculations from data provided by the School Construction Authority

Chart 10C: Spending on new school by year of completion, SCA conception to 2001



Source: EPP calculations from data provided by the School Construction Authority

Chart 10D: Average cost per seat of new schools, by year of completion, SCA inception to 2001



Source: EPP calculations from data provided by the School Construction Authority

Table 11: Creation of seats in elementary schools by type of project, inception of SCA to 2001

School	Seats
Additions	17,344
Additions/moderizations	4,387
Minischools	1,490
Modernizations and lease alterations	1,329
New schools *	27,876
TCUs and TCBs	20,140
Total	72,566

Source: EPP calculations from data provided by the School Construction Authority

* Including replacement schools and building conversions

Table 12: Construction and capacity

Capacity changes in elementary schools	**Seats**
Total Capacity 1989	501,001
Total Capacity 2001	577,141
Change in capacity 1989 to 2001	**76,140**
Contruction at elementary level	**Seats**
Additions	17,344
Additions/moderizations	4,387
Minischools	1,490
Modernizations and lease alterations	1,329
New schools *	27,876
TCUs and TCBs	20,140
Total	**72,566**

* Including replacement schools

Sources: Capacity figures, EPP calculations from BOE data
Seats created, EPP calculations from SCA data

Note: all figures exclude districts 75 and 78, but students in district 85 have beed distributed to their geographical districts

The difference between the increase in capacity and the amount of construction can be accounted for by changes in capacity rules or by increased use of leased space, which increases capacity without construction.

Appendix 3:
Map of Overcrowding in New York City Community School Districts

The map

MAP HERE

Appendix Four:
State Building Aid Claims and Formula-Generated Aid Amounts

The last appendix addresses issues pertinent to Chapter 7. Chapter 7. explains how the New York State Department of Education generates the formula which determines how much reimbursement districts get for their capital expenditures on new schools. Chapter 7. makes the argument that because the numbers used to generate the "capacity" portion of the formula are vastly different for New York City and the Rest of the State, the formula is inherently unfair to New York City.

The schema for Tables 1 and 2 is below to better enable you to read them. Following Tables 1 and 2 is a Summary Table. The data comes from the NYS Department of Education, and shows the new schools built in New York State in the period 1995 - 2001. The Summary Table distills the comparison of reimbursements for new schools in New York City and the Rest of the State.

Table 1. NYSED reimbursement formula for new schools built in the rest of New York State (excluding New York City.)
This table was broken out into four sections as diagrammed.

Table 1.

a.	b.
c.	d.

Table 2. NYSED reimbursement formula for new schools built in New York City.

Table 2.

a.	b.

Summary Table. The summary table is self-explanatory.

Table 1a. Building Projects in New York State Outside of New York City, FY'96 to present

District	Building	County	SED Date	Enrollment or Projected Enrollment	Estimated or Final Cost	Rated Capacity	Ratio of Rated Capacity to Enrollment	Preliminary Dollars
Rochester	James Madison School of Excell	Monroe	3/11/01	1,177	$31,707,398	1,477	1.25	$20,739,479
Lancaster	William Street School 5 - 6	Erie	5/14/01	1,055	$17,791,000	1,304	1.24	$13,441,488
Queensbury	New 4 - 5 Elementary	Warren	6/7/01	620	$8,957,587	914	1.47	$9,477,710
Perry	New Elementary School	Wyoming	10/1/02	819	$16,650,000	1,355	1.65	$14,432,435
Union Endicott	New Elementary School	Broome	10/21/02	770	$11,050,000	908	1.18	$8,989,986
Yonkers	Cedar Place	Westchester	6/22/03	500	$19,500,000	816	1.63	$7,403,568
Willsboro	New K - 12	Essex	10/28/03	355	$12,009,780	592	1.67	$7,905,128
Beacon	New High School	Dutchess	5/5/04	1,177	$30,472,000	1,987	1.69	$30,139,347
Southwestern	New Elementary School	Chatauqua	5/23/04	900	$16,907,000	1,339	1.49	$13,599,658
Gananda	New 9-12 High School	Wayne	5/26/04	402	$13,097,000	867	2.16	$13,016,367
Carthage	New Elementary School	Jefferson	6/7/04	500	$6,015,000	612	1.22	$6,577,335
Catskill	Broome Street	Greene	6/26/04	1,225	$17,700,000	1,431	1.17	$16,500,807
Westmoreland	New Middle School	Oneida	10/25/04	460	$7,602,420	534	1.16	$6,078,312
Niagara Wheatfield	West Street Elementary	Niagara	10/4/00	400	$9,100,000	803	2.01	$7,647,028
Pawling	New Middle School	Dutchess	11/16/00	421	$15,001,388	633	1.50	$7,059,952
Monroe Woodbury	New High School	Orange	1/31/01	1,896	$47,500,000	3,380	1.78	$50,041,385
North Warren	New K - 12	Warren	10/28/01	657	$15,844,000	1,478	2.25	$17,953,038
Yonkers	School 15	Westchester	11/18/01	353	$15,300,000	704	1.99	$6,707,094
Buffalo	Northwest Academy 4 - 8	Erie	12/6/01	800	$33,760,000	1,072	1.34	$13,711,128
Taconic Hills	New K - 12	Columbia	6/6/02	1,899	$46,750,000	3,505	1.85	$43,320,762
Chautauqua Lake	New PK - 12	Chatauqua	1/23/03	1,200	$31,900,000	2,679	2.23	$33,926,550
Warwick Valley	New Elementary School	Orange	5/4/03	679	$16,013,975	1,089	1.60	$14,013,738
Putnam Valley	New 9-12 High School	Putnam	5/29/03	829	$20,258,730	815	0.98	$12,394,794

Source: The Facilities, Information and Management Services Division of the New York State Education Department, March 2002.

Table 1b. Building Projects in New York State Outside of New York City, FY96 to present

District	Preliminary Dollars	Regional Cost Index	Preliminary Dollars x Regional Cost Index	Aid Ratio	Preliminary Dollars x Regional Cost Index x Aid Ratio	Estimated or Final Cost	Percent State share	Amount Local Share	Percent Local Share
Rochester	$20,739,479	1.0000	$20,739,479	0.719	**$14,911,685**	$31,707,398	0.47	$16,795,713	0.53
Lancaster	$13,441,488	1.0000	$13,441,488	0.713	**$9,583,781**	$17,791,000	0.54	$8,207,219	0.46
Queensbury	$9,477,710	1.0000	$9,477,710	0.709	**$6,719,696**	$8,957,587	0.75	$2,237,891	0.25
Perry	$14,432,435	1.0863	$15,677,954	0.925	**$14,502,108**	$16,650,000	0.87	$2,147,892	0.13
Union Endicott	$8,989,986	1.0000	$8,989,986	0.712	**$6,400,870**	$11,050,000	0.58	$4,649,130	0.42
Yonkers	$7,403,568	1.4618	$10,822,536	0.504	**$5,454,558**	$19,500,000	0.28	$14,045,442	0.72
Willsboro	$7,905,128	1.0000	$7,905,128	0.620	**$4,901,179**	$12,009,780	0.41	$7,108,601	0.59
Beacon	$30,139,347	1.1249	$33,903,751	0.682	**$23,122,358**	$30,472,000	0.76	$7,349,642	0.24
Southwestern	$13,599,658	1.0000	$13,599,658	0.752	**$10,226,943**	$16,907,000	0.60	$6,680,057	0.40
Gananda	$13,016,367	1.0425	$13,569,563	0.832	**$11,289,876**	$13,097,000	0.86	$1,807,124	0.14
Carthage	$6,577,335	1.0000	$6,577,335	0.917	**$6,031,416**	$6,015,000	1.00	-$16,416	0.00
Catskill	$16,500,807	1.0675	$17,614,611	0.667	**$11,748,946**	$17,700,000	0.66	$5,951,054	0.34
Westmoreland	$6,078,312	1.0000	$6,078,312	0.950	**$5,774,396**	$7,602,420	0.76	$1,828,024	0.24
Niagara Wheatfiel	$7,647,028	1.0000	$7,647,028	0.767	**$5,865,270**	$9,100,000	0.64	$3,234,730	0.36
Pawling	$7,059,952	1.0000	$7,059,952	0.315	**$2,223,885**	$15,001,388	0.15	$12,777,503	0.85
Monroe Woodbur	$50,041,385	1.0000	$50,041,385	0.575	**$28,773,796**	$47,500,000	0.61	$18,726,204	0.39
North Warren	$17,953,038	1.0000	$17,953,038	0.324	**$5,816,784**	$15,844,000	0.37	$10,027,216	0.63
Yonkers	$6,707,094	1.0000	$6,707,094	0.404	**$2,709,666**	$15,300,000	0.18	$12,590,334	0.82
Buffalo	$13,711,128	1.0000	$13,711,128	0.713	**$9,776,034**	$33,760,000	0.29	$23,983,966	0.71
Taconic Hills	$43,320,762	1.0000	$43,320,762	0.416	**$18,021,437**	$46,750,000	0.39	$28,728,563	0.61
Chautauqua Lake	$33,926,550	1.0000	$33,926,550	0.821	**$27,853,698**	$31,900,000	0.87	$4,046,302	0.13
Warwick Valley	$14,013,738	1.1872	$16,637,110	0.738	**$12,278,187**	$16,013,975	0.77	$3,735,788	0.23
Putnam Valley	$12,394,794	1.2130	$15,034,885	0.536	**$8,058,698**	$20,258,730	0.40	$12,200,032	0.60

Source: The Facilities, Information and Management Services Division of the New York State Education Department, March 2002.

Table 1c. Building Projects in New York State Outside of New York City, FY96 to present

District	Building	County	SED Date	Enrollment or Projected Enrollment	Estimated or Final Cost	Rated Capacity	Ratio of Rated Capacity to Enrollment	Preliminary Dollars
Watertown	New Middle School	Jefferson	4/13/04	1,019	$17,739,466	1,322	1.30	$19,111,082
Rome	New High School	Oneida	5/13/04	1,288	$45,423,459	2,643	2.05	$40,093,893
St. Regis Falls	New PK - 12	Franklin	6/20/04	368	$9,950,000	919	2.50	$11,222,331
Webster	New Middle School	Monroe	4/13/04	1,130	$21,046,500	1,860	1.65	$24,518,527
Valhalla	New Elementary School	Westchester	5/10/04	500	$16,026,259	616	1.23	$6,431,252
Fonda Fultonville	K-4 Elementary	Montgomery	7/13/04	578	$11,940,741	1,092	1.89	$11,592,738
Indian River	New Grade 4 -5	Jefferson	12/16/04	800	$7,410,000	800	1.00	$8,166,314
Frontier	Alternative Educ. Facility	Erie	3/30/05	150	$6,600,000	408	2.72	$5,983,728
Lackawanna	New Elementary School	Erie	4/7/05	880	$13,150,000	989	1.12	$12,075,929
William Floyd	New Middle School	Suffolk	4/28/05	1,400	$40,616,050	1,762	1.26	$24,594,057
Unadilla Valley	New PK - 12	Chenango	6/2/05	1,200	$36,402,503	2,535	2.11	$34,894,191
Genesee Valley	New PK - 12	Allegany	6/14/05	850	$26,919,500	1,818	2.14	$24,793,689
Freeport	New Elementary School	Nassau	7/21/05	375	$12,278,000	572	1.53	$5,972,800
Fairport	New Elementary School	Monroe	9/6/05	630	$18,154,500	1,020	1.62	$10,514,292
LeRoy	New Jr./Sr. High School	Genesee	9/12/05	700	$17,200,000	1,027	1.47	$15,916,881
Spencerport	New Elementary School	Monroe	9/22/05	630	$11,994,500	837	1.33	$8,918,883
Lake Pleasant	New K - 9	Hamilton	10/18/05	110	$6,675,723	453	4.12	$5,389,888
Mechanicville	New Elementary School	Saratoga	11/3/05	700	$12,555,000	1,117	1.60	$11,463,107
Middletown	Monhagen Middle School	Orange	9/16/99	700	$22,650,000	1,293	1.85	$16,739,109
Cobleskill Richmondville	New High School	Schoharie	5/31/00	758	$25,000,000	1,388	1.83	$19,395,735
Hudson	New Elementary School	Columbia	4/11/00	1,000	$21,465,000	1,634	1.63	$16,169,768
Stockbridge Valley	New K - 12	Madison	8/16/00	689	$9,680,000	1,089	1.58	$12,521,307
Middletown	Maple Hill Elementary	Orange	6/21/00	1,173	$20,440,000	1,461	1.25	$16,357,206
Gloversville	New Middle School	Fulton	6/25/00	855	$21,100,000	1,629	1.91	$21,929,228
Allegany-Limestone	New High School	Cattaraugus	1/1/02	834	$22,500,000	1,264	1.52	$18,695,178
Eastport-South Manor	Central High School	Suffolk	5/30/05	2,124	$88,239,000	3,057	1.44	$48,151,893
Niagara Falls City	Hyde Park High School	Niagara	7/17/02	2,450	$73,689,539	4,020	1.64	$59,748,180
				AVERAGE	**$21,954,660**	**1,378**	**1.68**	**$17,728,766**

Source: The Facilities, Information and Management Services Division of the New York State Education Department, March 2002.

Table 1d. Building Projects in New York State Outside of New York City, FY96 to present

District	Preliminary Dollars	Regional Cost Index	Preliminary Dollars x Regional Cost Index	Aid Ratio	Preliminary Dollars x Regional Cost Index x Aid Ratio	Estimated or Final Cost	Percent State share	Amount Local Share	Percent Local Share
Watertown	$19,111,082	1.0000	$19,111,082	0.896	**$17,123,529**	$17,739,466	0.97	$615,937	0.03
Rome	$40,093,893	1.0000	$40,093,893	0.920	**$36,886,382**	$45,423,459	0.81	$8,537,077	0.19
St. Regis Falls	$11,222,331	1.0000	$11,222,331	0.875	**$9,819,540**	$9,950,000	0.99	$130,460	0.01
Webster	$24,518,527	1.0425	$25,560,564	0.722	**$18,454,727**	$21,046,500	0.88	$2,591,773	0.12
Valhalla	$6,431,252	1.4814	$9,527,257	0.238	**$2,267,487**	$16,026,259	0.14	$13,758,772	0.86
Fonda Fultonville	$11,592,738	1.0282	$11,919,653	0.933	**$11,121,036**	$11,940,741	0.93	$819,705	0.07
Indian River	$8,166,314	1.0000	$8,166,314	0.950	**$7,757,998**	$7,410,000	1.05	-$347,998	-0.05
Frontier	$5,983,728	1.1166	$6,681,431	0.740	**$4,944,259**	$6,600,000	0.75	$1,655,741	0.25
Lackawanna	$12,075,929	1.1166	$13,483,982	0.916	**$12,351,328**	$13,150,000	0.94	$798,672	0.06
William Floyd	$24,594,057	1.7275	$42,486,233	0.942	**$40,022,032**	$40,616,050	0.99	$594,018	0.01
Unadilla Valley	$34,894,191	1.0000	$34,894,191	0.950	**$33,149,481**	$36,402,503	0.91	$3,253,022	0.09
Genesee Valley	$24,793,689	1.0000	$24,793,689	0.950	**$23,554,005**	$26,919,500	0.87	$3,365,495	0.13
Freeport	$5,972,800	1.7353	$10,364,600	0.720	**$7,462,512**	$12,278,000	0.61	$4,815,488	0.39
Fairport	$10,514,292	1.0469	$11,007,412	0.782	**$8,607,796**	$18,154,500	0.47	$9,546,704	0.53
LeRoy	$15,916,881	1.1320	$18,017,909	0.869	**$15,657,563**	$17,200,000	0.91	$1,542,437	0.09
Spencerport	$8,918,883	1.0469	$9,337,179	0.825	**$7,703,172**	$11,994,500	0.64	$4,291,328	0.36
Lake Pleasant	$5,389,888	1.0109	$5,448,638	0.151	**$822,744**	$6,675,723	0.12	$5,852,979	0.88
Mechanicville	$11,463,107	1.0000	$11,463,107	0.881	**$10,098,997**	$12,555,000	0.80	$2,456,003	0.20
Middletown	$16,739,109	1.0000	$16,739,109	0.671	**$11,231,942**	$22,650,000	0.50	$11,418,058	0.50
Cobleskill Richmondvill	$19,395,735	1.0000	$19,395,735	0.825	**$16,001,481**	$25,000,000	0.64	$8,998,519	0.36
Hudson	$16,169,768	1.0000	$16,169,768	0.685	**$11,076,291**	$21,465,000	0.52	$10,388,709	0.48
Stockbridge Valley	$12,521,307	1.0000	$12,521,307	0.882	**$11,043,793**	$9,680,000	1.14	-$1,363,793	-0.14
Middletown	$16,357,206	1.0000	$16,357,206	0.671	**$10,975,685**	$20,440,000	0.54	$9,464,315	0.46
Gloversville	$21,929,228	1.0000	$21,929,228	0.847	**$18,574,056**	$21,100,000	0.88	$2,525,944	0.12
Allegany-Limestone	$18,695,178	1.0000	$18,695,178	0.883	**$16,507,842**	$22,500,000	0.73	$5,992,158	0.27
Eastport-South Manor	$48,151,893	1.7275	$83,182,395	0.775	**$64,466,356**	$88,239,000	0.73	$23,772,644	0.27
Niagara Falls City	$59,748,180	1.0000	$59,748,180	0.931	**$55,625,556**	$73,689,539	0.75	$18,063,983	0.25
	$17,728,766	**1.0879**	**$19,375,080**	**0.735**	**$14,707,057**	**$21,954,660**	**0.67**	**$7,247,603**	**0.33**

Source: The Facilities, Information and Management Services Division of the New York State Education Department, March 2002.

Table 2a. Building Projects in New York City, FY96 to present

District	Building	County	SED Date	Enrollment or Projected Enrollment	Estimated or Final Cost	Rated Capacity	Ratio of Rated Capacity to Enrollment	Preliminary Dollars
Bronx District 11	New PS/IS 194	Bronx	5/5/05	900	$86,687,745	900	1.00	$9,656,280
Manhattan District 6	New PS 178	Manhattan	4/21/04	441	$34,284,872	441	1.00	$4,088,952
Brooklyn District 20	New PS 69	Brooklyn	12/17/03	724	$50,442,456	724	1.00	$6,602,156
Bronx District 9	PS 235 Rafael Hernandez Bil	Bronx	6/20/01	853	$49,530,935	960	1.13	$9,364,128
Brooklyn District 19	PS 7 Brooklyn School	Brooklyn	12/23/01	1,000	$41,460,893	984	0.98	$8,618,856
Queens High School District	New High School 566	Queens	5/3/05	1,153	$134,129,140	1,153	1.00	$16,994,067
Staten Island District 31	New PS 58 Dist 31	Staten Island	11/29/04	1,073	$72,911,768	1,073	1.00	$9,932,761
Queens District 30	New PS 58 Dist 30	Queens	9/22/04	1,140	$60,907,455	1,140	1.00	$10,526,760
Queens District 30	New Early Education Cntr 28	Queens	8/26/04	458	$30,411,755	458	1.00	$4,239,706
Queens District 27	New IS 242	Queens	6/9/04	1,675	$79,655,489	1,675	1.00	$22,704,625
Queens District 25	New EEC 242	Queens	7/21/04	350	$27,813,716	350	1.00	$3,242,400
Queens District 30	New EEC 228	Queens	4/19/04	318	$22,064,769	318	1.00	$2,948,496
Brooklyn District 23	PS/IS 156 Waverly School	Brooklyn	5/25/04	765	$77,019,927	1,201	1.57	$12,687,484
Brooklyn High School District	New High School 535	Brooklyn	12/30/03	816	$65,903,229	936	1.15	$13,337,064
Brooklyn High School District	HS 824	Brooklyn	6/26/02	176	$50,760,246	314	1.78	$2,738,708
Richmond District 31	PS 600	Richmond	9/25/02	900	$47,791,255	900	1.00	$7,965,900
Queens District 30	IS 230	Queens	6/26/02	745	$40,918,504	753	1.01	$9,577,407
Queens District 28	PS 161	Queens	3/20/02	632	$40,989,036	650	1.03	$5,748,600
Queens High School District	Renaisance Collaborative	Queens	8/31/00	544	$23,812,000	544	1.00	$7,283,072
Bronx High School District	Health Oppt Collabor HS	Bronx	4/11/00	700	$12,443,710	750	1.07	$9,897,000
Brooklyn District 15	PS 230 Doris L. Cohen Schoo	Brooklyn	3/26/00	1,201	$7,902,000	595	0.50	$5,057,500
Queens High School District	New High School 680	Queens	6/24/01	459	$21,979,609	459	1.00	$3,935,925
Brooklyn High School District	ACORN HS 499	Brooklyn	6/27/00	623	$7,885,500	686	1.10	$9,101,848
Queens District 27	PS 65	Queens	9/10/00	624	$7,631,250	469	0.75	$4,047,001
Brooklyn Alternative School Dist.	Bridges to Brooklyn HS 555	Brooklyn	3/23/00	480	$6,500,000	510	1.06	$6,772,800
				AVERAGE	**$44,073,490**	**758**	**1.05**	**$8,282,780**

Source: The Facilities, Information and Management Services Division of the New York State Education Department, March 2002.

Table 2b. Building Projects in New York City, FY96 to present

District	Preliminary Dollars	Regional Cost Index	Cost Allowance x Regional Cost Index	Aid Ratio	Cost Allowance x Regional Cost Index x Aid Ratio	Estimated or Final Cost	Percent State Share	Amount Local Share	Percent Local Share
Bronx District 11	$9,656,280	1.8592	$17,952,956	0.647	**$11,615,562**	$86,687,745	0.13	$75,072,183	0.87
Manhattan District 6	$4,088,952	1.8191	$7,438,213	0.647	**$4,812,524**	$34,284,872	0.14	$29,472,348	0.86
Brooklyn District 20	$6,602,156	1.8191	$12,009,982	0.647	**$7,770,458**	$50,442,456	0.15	$42,671,998	0.85
Bronx District 9	$9,364,128	1.0000	$9,364,128	0.547	**$5,122,178**	$49,530,935	0.10	$44,408,757	0.90
Brooklyn District 19	$8,618,856	1.0000	$8,618,856	0.547	**$4,714,514**	$41,460,893	0.11	$36,746,379	0.89
Queens High School Distri	$16,994,067	1.8592	$31,595,369	0.647	**$20,442,204**	$134,129,140	0.15	$113,686,936	0.85
Staten Island District 31	$9,932,761	1.8592	$18,466,989	0.647	**$11,948,142**	$72,911,768	0.16	$60,963,626	0.84
Queens District 30	$10,526,760	1.8592	$19,571,352	0.647	**$12,662,665**	$60,907,455	0.21	$48,244,790	0.79
Queens District 30	$4,239,706	1.8592	$7,882,461	0.647	**$5,099,953**	$30,411,755	0.17	$25,311,802	0.83
Queens District 27	$22,704,625	1.8191	$41,301,983	0.647	**$26,722,383**	$79,655,489	0.34	$52,933,106	0.66
Queens District 25	$3,242,400	1.8592	$6,028,270	0.647	**$3,900,291**	$27,813,716	0.14	$23,913,425	0.86
Queens District 30	$2,948,496	1.8191	$5,363,609	0.647	**$3,470,255**	$22,064,769	0.16	$18,594,514	0.84
Brooklyn District 23	$12,687,484	1.8191	$23,079,802	0.647	**$14,932,632**	$77,019,927	0.19	$62,087,295	0.81
Brooklyn High School Dist	$13,337,064	1.8191	$24,261,453	0.647	**$15,697,160**	$65,903,229	0.24	$50,206,069	0.76
Brooklyn High School Dist	$2,738,708	1.0000	$2,738,708	0.647	**$1,771,944**	$50,760,246	0.03	$48,988,302	0.97
Richmond District 31	$7,965,900	1.8191	$14,490,769	0.647	**$9,375,527**	$47,791,255	0.20	$38,415,728	0.80
Queens District 30	$9,577,407	1.0000	$9,577,407	0.647	**$6,196,582**	$40,918,504	0.15	$34,721,922	0.85
Queens District 28	$5,748,600	1.0000	$5,748,600	0.547	**$3,144,484**	$40,989,036	0.08	$37,844,552	0.92
Queens High School Distri	$7,283,072	1.0000	$7,283,072	0.547	**$3,983,840**	$23,812,000	0.17	$19,828,160	0.83
Bronx High School District	$9,897,000	1.0000	$9,897,000	0.547	**$5,413,659**	$12,443,710	0.44	$7,030,051	0.56
Brooklyn District 15	$5,057,500	1.0000	$5,057,500	0.547	**$2,766,453**	$7,902,000	0.35	$5,135,548	0.65
Queens High School Distri	$3,935,925	1.0000	$3,935,925	0.547	**$2,152,951**	$21,979,609	0.10	$19,826,658	0.90
Brooklyn High School Dist	$9,101,848	1.0000	$9,101,848	0.547	**$4,978,711**	$7,885,500	0.63	$2,906,789	0.37
Queens District 27	$4,047,001	1.0000	$4,047,001	0.547	**$2,213,710**	$7,631,250	0.29	$5,417,540	0.71
Brooklyn Alternative Schoo	$6,772,800	1.0000	$6,772,800	0.547	**$3,704,722**	$6,500,000	0.57	$2,795,278	0.43
	$8,282,780	**1.4356**	##########	**0.607**	**$7,784,540**	**$44,073,490**	**0.22**	**$36,288,950**	**0.78**

Source: The Facilities, Information and Management Services Division of the New York State Education Department, March 2002.

School District Building Projects

New York State Education Department -- Formula for Reimbursement -- SUMMARY TABLE

Region		New School Construction, FY96 to present	Estimated or Final Cost	Enrollment or Projected Enrollment	Rated Capacity	Ratio of Rated Capacity to Enrollment	Initial NYSED Reimbursement Ceiling
Rest of State	**TOTAL**	**50**					
	AVERAGE		**$21,954,660**	**860**	**1,378**	**1.68**	**$17,728,766**
	High		$88,239,000	2,450	4,020	4.12	$59,748,180
	Low		$6,015,000	110	408	0.98	$5,389,888
New York City	**TOTAL**	**25**					
	AVERAGE		**$44,073,490**	**750**	**758**	**1.05**	**$8,282,780**
	High		$134,129,140	1,675	1,675	1.78	$22,704,625
	Low		$6,500,000	176	314	0.50	$2,738,708

Region		1st multiplier: Regional Cost Index	2nd multiplier: Aid Ratio	Final NYSED Reimbursement Ceiling	Estimated or Final Cost	Percent State Share	Amount Local Share	Percent Local Share
Rest of State	**AVERAGE**	**1.09**	**0.735**	**$14,707,057**	**$21,954,660**	**0.67**	**$7,247,603**	**0.33**
	High	1.74	0.95	$64,466,356	$88,239,000	1.14	$28,728,563	0.88
	Low	1.00	0.15	$822,744	$6,015,000	0.12	-$1,363,793	-0.14
New York City	**AVERAGE**	**1.44**	**0.607**	**$7,784,540**	**$44,073,490**	**0.22**	**$36,288,950**	**0.78**
	High	1.86	0.65	$26,722,383	$134,129,140	0.63	$113,686,936	0.97
	Low	1.00	0.55	$1,771,944	$6,500,000	0.03	$2,795,278	0.37

Source: The Facilities, Information and Management Services Division of the New York State Education Department, March 2002.